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Hunterian Lecture

ON

ACUTE INFECTIVE PROCESSES DUE TO THE STREPTOCOCCUS,

WITH SPECIAL REFERENCE TO THE VALUE OF VACCINES AND SERUMS IN THEIR TREATMENT.

Delivered before the Royal College of Surgeons of England on March 15th, 1912,

BY W. GIRLING BALL, F.R.C.S. ENG.,

SURGEON TO ALEXANDRA HOSPITAL FOR HIP DISEASE; ASSISTANT SURGEON TO EAST LONDON HOSPITAL; DEMONSTRATOR OF PATHOLOGY (SURGICAL), ST. BARTHOLOMEW'S HOSPITAL; AND CLINICAL ASSISTANT TO ST. PETER'S HOSPITAL FOR STONE.

MR. PRESIDENT AND GENTLEMEN,—In choosing as the title of this lecture "Acute Infective Processes due to the Streptococcus, with Special Reference to the Value of Vaccines and Serums in their Treatment," my main object has been to bring to your notice certain phenomena which have resulted from the introduction of these agents in the treatment of disease. Vaccine-therapy has of recent years been largely in vogue, and the stage has now been reached in which it is recognised to have certain limitations; its use in these conditions has not, so far as I know, however, received much attention. It occurred to me, therefore, that possibly some information might be obtained by using them in the treatment of acute infections, and it is in bringing before you my results that I hope to merit the honour which you have conferred upon me.

TYPE OF LESION.

It will be well, in the first place, to illustrate the type of case to which allusion is made. Although no organ or tissue in the body is immune to infection by the streptococcus, it is curious how it exhibits remarkable preference for certain situations, is responsible for that type of lesion which is severe in character, associated with marked constitutional disturbance, and is so often found to be the cause of a fatal issue. The frequency with which the streptococcus is isolated from the heart's blood in the post-mortem room is of itself an incitement to find some method of treatment which will help to diminish the number of fatalities, and it is to such conditions that I wish to make allusion; to put aside all those in which the lesions have been more or less trivial, and only to refer to those in which it was either found that the conditions present were of a severe character or which, by virtue of the situation of the infection, invariably lead to a fatal conclusion.

For present purposes the only item which needs to be noted in connexion with the pathology of these conditions is this—that all infections are primarily local, some of them becoming permanently circumscribed, while others give rise to septicæmic and pyæmic conditions. It is impossible to draw a very rigid line between these classes, for the dissemination of micro-organisms is probably a very gradual event; moreover, it is difficult to say exactly when they leave the local focus in order to become diffused in the blood stream. For practical purposes, however, it is convenient to place the various diseases under one of two headings: (1) a local group, in which it is not possible to recover the infecting agent from the blood stream by the ordinary methods of cultivation; or (2) a septicæmic group, in which an investigation of this nature yields a positive result.

TECHNIQUE OF INVESTIGATION.

In classifying infective processes in this way the object in my mind is to emphasise the importance of being able to recognise, as far as possible, the stage of a disease at which a patient happens to be, and to know whether the micro-organisms are simply localised in an abscess cavity at the primary seat of infection, or whether they are circulating in the fluid tissues of the body, for on this knowledge will depend both the prognosis and the indications for the method of treatment that should be adopted. It is also important for us to estimate the degree of infection, both with regard to the virulence of the infecting agent, and, if the blood stream has become involved, to estimate the number of micro-organisms that may be circulating in it.

To my mind, in all cases of streptococcus infection a certain number of bacteria do get into the blood stream, but we are unable to demonstrate their presence by the usual methods of investigation. Doubtless they are attacked by the antibodies of the serum and by the leucocytes, beyond which barrier a very large proportion of the bacteria never get, the processes of natural immunity being sufficiently powerful in most cases to overcome the bacterial invasion. In others, however, this is not so, and the micro-organisms obtain the upper hand and will be found on investigation, although not always even in the most advanced infections.

It is in order to obtain information of this character that the following routine technique has been carried out in the investigation of the series of cases to which reference will be made later. Of primary importance, and essentially so, must be an accurate clinical diagnosis. It seems unnecessary to lay emphasis on this fundamental fact, but there is a tendency nowadays to make a diagnosis of an infective process purely from the standpoint of the bacteriologist—namely, the isolation of the infecting agent—and to label a disease as being "a streptococcus infection." We need to know, as much as ever, how far the infection has spread as indicated by clinical observation, and this should receive our first attention. The bacteriological investigation should only be a side issue in helping to complete a diagnosis, to give the information already indicated both as regards the determination of the degree of infection and the prognosis. Further information should also be sought for by making an examination of the characters of the blood which can be discovered by a suitable technique—e.g., the enumeration of the leucocytes, and the degree of anæmia from which the patient is suffering. The former of these has been known for many years to be of some service, and it is an agreeable factor in our observations when it is noted that in the earlier stages of septic infection the patient puts up a corresponding leucocytosis. The proper position as to the degree of anæmia produced does not seem to have been fully appreciated up to the present, but there is evidence that it may prove to be a valuable informant as to the severity of the infection, at any rate, from the point of view of prognosis. The bacteriological investigations that have been carried out in my cases are as follows. In the first place, an attempt has been made to isolate the micro-organism from the primary focus of infection; the methods that have been adopted under different circumstances need not be referred to here. Special emphasis is laid on the necessity of making this observation at the earliest possible opportunity and before a secondary infection occurs, for this will mask the original cause of the septic processes. If such has not been possible, or the cultures were unfavourable in their results, on occasion a metastatic deposit has given information of equal value. The third method adopted has been to attempt to isolate the infective agent from the circulating blood stream; large quantities of blood—5 to 10 c.c.—being withdrawn from a vein and cultivated in a quantitative manner in suitable media, the latter with the object of arriving at some estimate as to the number of micro-organisms present. The advantages of blood cultivation have been firstly to demonstrate the severity of the infection. Secondly, it has occasionally proved to be the only method of isolating the infecting agent in the disease process, for no primary focus of infection has been found. Thirdly, a positive cultivation of the blood usually demonstrates the presence of a single micro-organism, thus, as a rule, indicating which was the primary infecting agent in the original focus of the disease from which only a mixture of bacteria could be obtained. And, lastly, the streptococcus isolated from the blood may reasonably be regarded as more virulent than that which can be obtained from a local focus, and, consequently, is assumed to be of more value in the preparation of a vaccine than would otherwise be the case.

Having isolated the streptococcus, investigations have been carried out with the object of demonstrating to which group it belonged. The recognition of the type of streptococcus with which one has to deal is, to my mind, of considerable importance. There are several well-known groups which have been differentiated by certain tests,[1] and it is only by means of suitable investigations that we are able to arrive at a conclusion as to the exact nature of such an infective agent. Certain of these types are more virulent than others

[1] 1. Gordon's test. 2. Virulence of the micro-organism as evidenced by its pathogenicity for the mouse.

and the recognition of such influences the prognosis that should be given. Further, the knowledge of the existence of many types of streptococci emphasises the necessity for the use of autogenous vaccines in the treatment of lesions for which they are responsible; for we know that specific antibodies are stimulated by the introduction of these agents into the tissues, and it is obvious that where such is the case the use of a stock agent is of less value than the autogenous variety.

PREPARATION OF VACCINE.

The vaccines, as far as possible, have been prepared from the micro-organism isolated from the site of infection or from the blood. The injection of a stock vaccine prepared from a mixture of streptococci of the same group is allowable, but granting this, the one obtained from the tissues is preferable. In some few instances the latter has been impossible—e.g., erysipelas—and under these circumstances a stock agent, prepared from a mixture of the type known commonly to be the cause of the lesions dealt with, has been introduced. Yet again, in some few instances a homologous vaccine has been introduced during the preparation of an autogenous variety so as to avoid a loss of time which might possibly have been detrimental to the recovery of the patient.

The methods have varied, but in the main two seem to have met with the best results—namely, those in which heat has been used, the emulsion being submitted to a temperature of 60° C. for half an hour—a time quite sufficient to kill streptococci; in others, the streptococci have been allowed to autolyse by placing the emulsion in normal salt solution in the incubator at 37° C. for 24 hours. The use of a sensitised vaccine as suggested by Besredka was adopted on one occasion. Young primary cultures from 12 to 24 hours have been used for the preparation of the vaccine. In all cases a check as to the sterility of the agent has been made by cultivation after its preparation. The enumeration of the bacteria has been carried out by an actual estimation on the Thoma Zeiss blood-counting stage. In all cases the vaccines have been introduced subcutaneously, this being considered to be the most reliable route.

With regard to the sera, several varieties have been tried: normal horse serum, antistreptococcus pyogenes serum, polyvalent streptococcus serum, have each been used in turn. They have been introduced by one of three ways: (*a*) subcutaneously; (*b*) intravenously; or (*c*) as a local application to the initial focus of infection.

METHODS OF TREATMENT.

The treatment adopted has first consisted in the use of the ordinary surgical methods. Clearing out the uterus in cases of puerperal infection, treatment of the middle ear, incision of the subcutaneous tissues in cases of cellulitis, &c., none of these have been omitted or dispossessed of their position by the institution of vaccine-therapy. The use of vaccines and sera has only come in as an adjuvant to the treatment, in some cases as a routine, in others where the surgical methods have failed to bring about the desired result.

REASONS FOR USE OF VACCINES AND SERUMS.

It may well be asked why it is that one should attempt to produce immunity when the patient is already manufacturing substances in his own tissues which should stimulate the production of antibodies. It is a little difficult at first sight to expect to produce an active immunity in the body when such a condition is present. There is little doubt that if the sera are of any service at all, their introduction in the early stages of infection is indicated, but regarding the action of a vaccine some explanation is required. It is obvious that some micro-organisms must be carried off into the blood in all cases of acute infections; their toxins are circulating in the blood stream and to a certain extent are responsible for the calling out of extra antibodies to combat their action. The dilution of such toxins, however, by the serum renders their action ineffective; moreover, a large number of the micro-organisms are phagocyted by the leucocytes; such is seen in conditions where there is localised immunity to the streptococcus—e.g., in erysipelas; others, however, get beyond this barrier and do stimulate the production of bacteriotropic substances, but yet to such a small extent that the balance between the infection and the response is about equal. It is under such circumstances that the excessive stimulation of the resistance machinery may be effective in preventing an upset of this balance in an unfavourable direction.

Serum-therapy has as its object the neutralising of the toxins which are produced by the bacteria by providing for the human tissues antibodies in larger quantities than they themselves possess, and it is obvious that the use of this agent can be only of service when a small amount of such toxins is present in the body—i.e., in early stages of infection.

Vaccine-therapy, on the other hand, has as its object the stimulation of the human tissues to produce antibodies for themselves, and this has been experimentally shown to occur. By the introduction of a vaccine in the tissues so large an amount of endotoxin is introduced at one time that the stimulation of the production of antibodies is markedly in excess of that which we might hope for as the result of the normal activity, for the same dilution of these toxins does not occur as is the case when they are liberated from the bacteria at the local site of infection, especially when the method of introduction is by the subcutaneous tissues.

In certain conditions the use of vaccine-therapy is contra-indicated and serum-therapy is of little service, for when a large number of micro-organisms are circulating in the blood stream the time will arrive when the tissues are put to it to resist the onslaught of the bacteria, and having put forth all their energies they can do no more. It is quite obvious from this that it is useless to attempt to make them do so by introducing further numbers of dead cocci into the tissues. The resistance has reached its limit, and if such is insufficient to ward off the action of the poisonous substances there can be no object in attempting to stimulate the tissues to do more work. Assuming, therefore, that some good can be done by the introduction of dead micro-organisms at that stage in which the balance between toxin and antibody is about equal, it is equally wise to introduce them before such a condition manifests itself—that is to say, to utilise bacterial agents in the early stages of the disease. Further, it has to be decided exactly how a stimulation of the resistance may be brought about. It is necessary that a summation of positive phases should be produced—or, in other words, that a negative resistance should be avoided. The introduction of small doses of vaccine has been shown experimentally to do this. This has been my rule, for the more acute the lesion and the more generalised the infection the smaller has been the dose of dead micro-organisms introduced into the tissues. Working on these lines, 53 cases of the type mentioned have been dealt with, infections in various regions of the body having been treated.

INFECTIONS OF THE UTERUS.

Among others, the interior of the uterus has been the initial site of the infection. For sake of convenience the cases may be grouped under the following headings: (1) Those in which the infection remained localised to the endometrium; (2) those in which the surrounding tissues—namely, the broad ligament, &c.—have been implicated; and (3) those in which the micro-organisms have been isolated from the blood during life, from the heart's blood in the post-mortem room, or from a pyæmic abscess. As an illustration of the first of these classes let me refer to a case:—

A woman, aged 30, came under treatment for pyrexia on the day after delivery. Cultivations were made from the interior of the uterus and a streptococcus isolated. Subcutaneous inoculations of antipyogenes serum were given pending the preparation of a vaccine, without producing any obvious effect. The uterus had been previously cleared out. Within 48 hours of the introduction of the vaccine the temperature fell to normal and remained there. (Chart III.)

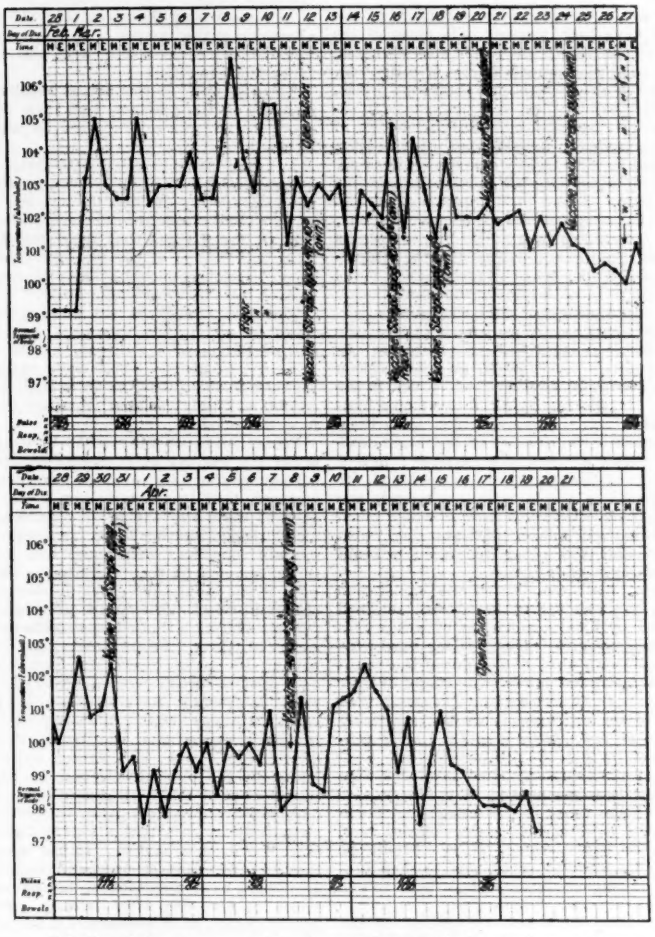
The next type is illustrated by the following case:—

A woman, aged 35, came under treatment with a parametric abscess seven weeks after the birth of her child. From the interior of the uterus the streptococcus pyogenes was isolated. The abscess was opened and the same micro-organism isolated. A cultivation of the blood was negative in its result. An autogenous vaccine was introduced in doses varying from 10,000,000 to 50,000,000, given in two series of weekly inoculations, each series being a fortnight apart. The temperature, which persisted throughout, was not influenced by the introduction of the first series, but immediately fell to normal subsequently to the administration of the second series, having previously been raised for a period extending over six weeks. (Chart II.)

The third type is well illustrated in the case which here follows:—

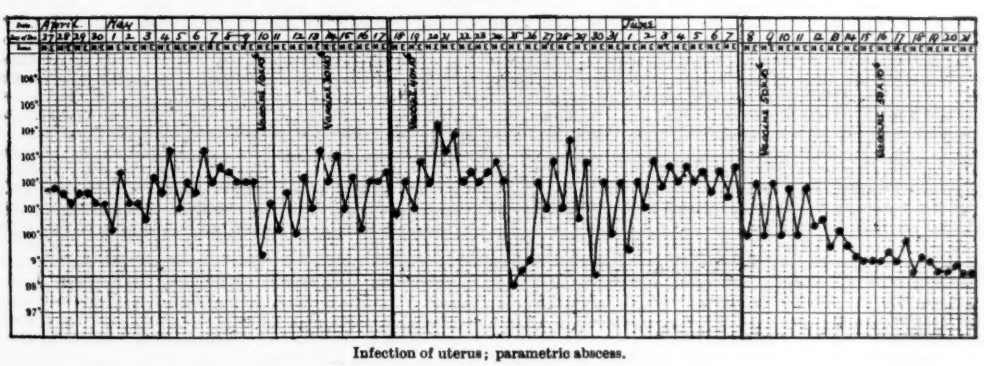
The patient, a female aged 20, required to have her uterus cleared out a week after her child was born owing to a rise in temperature and pulse to 103° F. and 130 per minute respectively. There was evidence of severe bacterial infection, for a cultivation of the blood demonstrated the presence of the streptococcus pyogenes in 1 c.c. of that fluid. A vaccine was prepared and introduced subcutaneously. The blood cultivation was repeated three weeks later and was still found to contain micro-organisms. The patient subsequently developed a subcutaneous

CHART I.



Infection of uterus; recovery of streptococcus from the blood; subcutaneous abscess.

CHART II.



Infection of uterus; parametric abscess.

abscess in the region of the upper arm from which streptococci were isolated. A continuous series of eight inoculations of the vaccine was made in doses varying from 20,000,000 to 40,000 000, but as far as the temperature chart was concerned the only point noted was a gradual fall from the time of the first inoculation. The patient survived her illness and made a complete recovery. (Chart I.)

Fifteen cases of acute streptococcus infection of the interior of the uterus have been treated. The onset of the symptoms of fever after delivery or. as it was in some cases, after a miscarriage was the indication for investigation. The diseases usually go by the name of puerperal septicæmia, but I have preferred to speak of them as streptococcus infections of the uterus with subsequent complications owing to the impossibility of being able to decide when the infection became generalised, and so to be rightly called a septicæmia. In all the cases, with one exception, the micro-organism was isolated from the interior of the uterus, and was almost invariably found to be streptococcus pyogenes. In one, however, the streptococcus fæcalis was isolated, in two others a coliform bacillus was found in association with the streptococcus, and in another staphylococcus pyogenes aureus was also found. In the majority of instances the predisposing cause of the infection was a portion of retained placenta.

Cultivations from the blood stream were made in 12 of the cases, in several of them on more than one occasion. In 5 the streptococcus pyogenes was isolated, on one occasion from a single drop of blood, on another from ½ c.c., in the remainder from 1 c c. In the remaining 7 cases no micro-organisms were isolated from the blood, which is a little surprising when one realises the severity of the lesion dealt with, but at the same time a common experience; in 2 of these there was no doubt of their existence in the blood, for pyæmic lesions were found in the post-mortem room in one and during life in the other. Of the 3 cases in which blood cultivations were not carried out 2 patients died with septicæmic symptoms and the other recovered without evidence of the severer type of infection.

The routine treatment has consisted in the exploration of the uterine cavity, the removal of blood-clot, retained placenta, &c., followed by local application of antiseptics and douches. The bacteriological investigations have been carried out concurrently with this, and pending the result serum-therapy has been instituted in the early stages of their infection in no less than 12 of the cases. The serum used was for the most part of the antipyogenes variety, this being the nearest approach to an autogenous agent, and being considered to give better results than the polyvalent type. Subcutaneous injections of 25–50 c.c. in most instances were preferred; intra-uterine dressings soaked in the serum also were adopted. In 5 of the cases it was introduced intravenously in combination with normal saline solution, and was repeated on one or two occasions as the conditions seemed to indicate. The inoculation by this method produced a severe rigor coming on from half an hour to two hours afterwards on four occasions.

The vaccines given were, with two exceptions, of the autogenous variety, in doses varying from 5,000,000–100,000,000. In the smaller doses the interval allowed to elapse was 24 to 48 hours and in the larger a week to 10 days. No very remarkable changes were noted as a result of the use of sera with the exception of the production of rigors, as already mentioned. The following results were seen as occurring subsequently to the introduction of the vaccines, the temperature chart serving as an indicator.

1. In 6 cases no obvious effect was observed; of these 1 patient recovered and 5 patients died.

2. In 4 cases the temperature made a gradual return to the normal from the time of the initial inoculation; in some this result was obtained after the inoculation of a single dose, while in others a series in increasing amounts was required before a permanent normal temperature was produced. In one case the temperature remained high until a 100,000,000 dose of vaccine was given, and then it straightway fell to normal. (Chart IV.)

3. In 2 cases the initial inoculation was followed by the desired result within 48 hours.

4. No effect was observed as the result of a mixed stock streptococcus and bacillus coli vaccine inoculation in one instance, but in combination with an autogenous coli vaccine, the micro-organism found with the streptococcus, the result was instantaneous, for the temperature fell to normal within 24 hours. (Chart V.)

5. Rigors seemed to follow each injection in a case of pelvic thrombosis, possibly a coincidence, for this condition is usually associated with severe fever.

6. In one instance the temperature fell to normal subsequently to the introduction of these agents, but failed to maintain this effort as the patient died.

In summarising these events it will be observed that some alteration in the course of the fever curve took place in no less than nine cases, and, with the exception of two, in a favourable direction.

Turning now to the actual results with regard to the recovery of the patients from their disease, which without exception was of a severe character, the following points will be noted.

1. Seven patients died. Of these, in 3 streptococci were demonstrated in the blood stream during life, 1 had pyæmic abscesses present during life, and the remainder were found to have similar lesions in the post-mortem room.

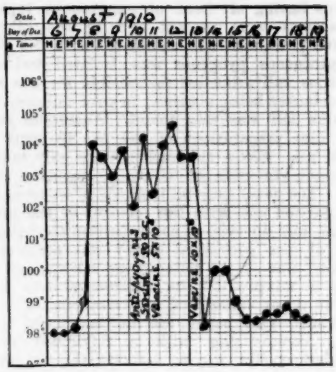
2. Of the 8 cases that recovered 2 gave positive results from cultivations of the blood, in one instance in a single drop. Curiously enough, this patient had large daily doses of vaccine introduced subcutaneously.

The cases that made the most speedy recovery have been those in which the treatment has been adopted in the earliest stages of the disease, but in others similar results have not occurred. These cases cannot all be regarded as septicæmic conditions, as in a large percentage the streptococcus was only isolated from the uterine cavity and not from the blood.

Recently a paper was read by Western, who brings forward under the heading of puerperal septicæmia 100 cases dealt with on similar lines to those mentioned. It is noteworthy, however, that in the tables he gives in only about 37 per cent. of these was the micro-organism demonstrated in the blood stream during life. In some eight or ten others pyæmic conditions were found, and in the remainder there is no evidence of their septicæmic character at all. Moreover, in the tabulations given no attempt is made to classify the streptococci. His figures go, further, to show that of 56 persons who were treated by vaccine-therapy 10 had streptococci in their blood stream and recovered, while 13 having the same condition died. In 28 cases without positive blood cultivations 24 lived and 4 died. It is interesting to note that in 44 cases in which vaccine-therapy was not instituted 2 had streptococci in the blood stream and lived, 12 with a similar condition died, and 17 having no micro-organism circulating in the blood lived, and 11 died. This relation of the presence of micro-organisms in the interior of the uterus during the puerperium is an interesting one, and does not necessarily indicate that a severe illness will result from its existence in that cavity. It has been shown by Mansfield that 22·5 per cent. of puerperal women without any febrile symptoms have streptococci in the uterine cavity on the fourth or fifth day after delivery. Stoltz even places his figures as high as 36 per cent.; it is quite possible that many of these are without pathogenic properties, and are simply living as inoffensive saprophytes in the uterus; on the other hand, in cases in which fever is present it is equally unwise to regard it as being without significance or to disregard the possibility of diffusion of the streptococcus into surrounding tissues, the recognition of which is difficult and sometimes impossible. It seems to me that in this condition the right line to take is to make an investigation of the interior of the uterus from the bacteriological point of view as soon as the febrile symptoms make their appearance. Repeated investigations of the blood stream are indicated with the object of demonstrating the presence or absence of micro-organisms in that fluid, and of numerically estimating them if present. The question of virulence also merits attention, for it is quite certain that there are numerous non pathogenic streptococci lurking in the vagina, which are liable to be mistaken for the more important bacteria, and it is of little scientific significance that a patient gets well during a course of vaccine-therapy if the agent used is prepared from a micro-organism of this type.

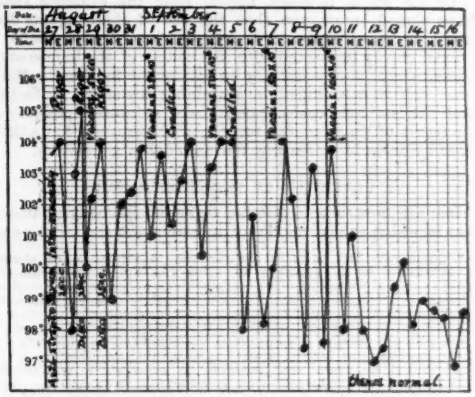
Yet, again, too much stress must not be laid on the fact that the patient who has streptococci circulating in the blood stream gets well, for Lenhartz has reported cases of puerperal septicæmia in which neither vaccine- nor serum-therapy was instituted. In a series of 48 cases streptococci were found in the blood of 5 and coliform bacillus in 2, of a total of 17 that recovered

CHART III.



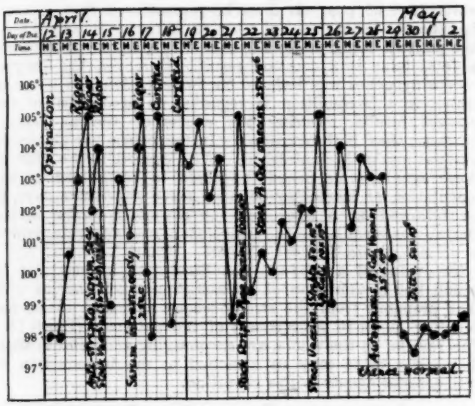
Infection of endometrium.

CHART IV.



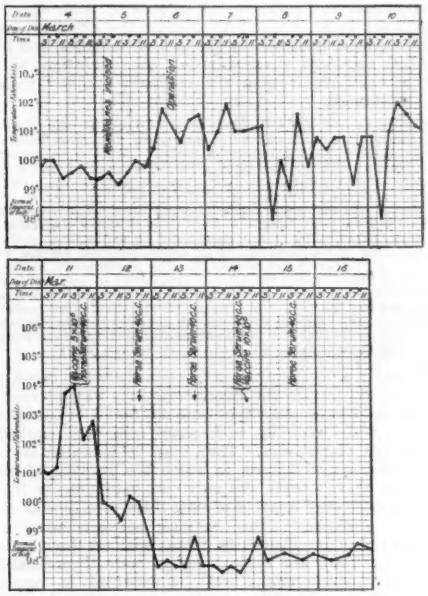
Infection of uterus; effect of increasing dose of vaccine on temperature

CHART V.



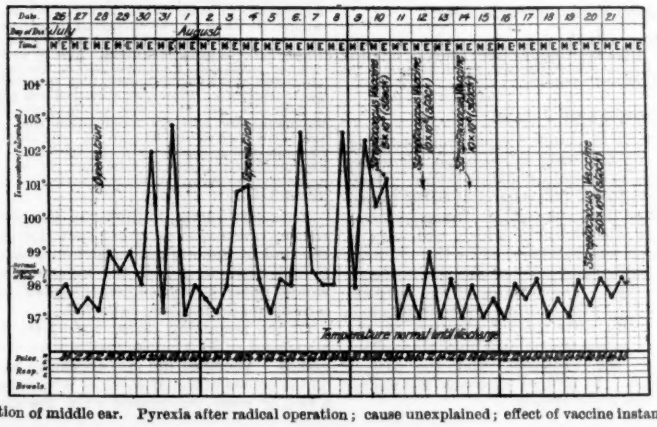
Infection of uterus. Illustrating advantage of autogenous vaccines.

CHART VI.



Infection of middle ear.

CHART VII.



Infection of middle ear. Pyrexia after radical operation; cause unexplained; effect of vaccine instantaneous.

On the whole, it would appear from the evidence that I have placed before you that the use of these agents does result in many cases in the production of a sequence of events, chiefly connected with the course of the temperature curve, which may justifiably be attributed to them. Moreover, one is encouraged in examining my series in finding that the last four cases treated have recovered, possibly as the result of the improved technique of diagnosis and a little more boldness in increasing the size of the inoculation.

INFECTIONS OF THE MIDDLE EAR.

Let me now turn to another region of the body—namely, that in which the initial site of infection was the middle ear.

A nurse who had pains in one ear due to formation of abscess in tympanic cavity required to have the tympanic membrane incised and pus evacuated. The streptococcus pyogenes was found on cultivation. Her general condition despite this proceeding continued to get worse. The complete operation for the treatment of the disease was performed, but in spite of the fact that the tissues were apparently healthy at the time of the operation the condition was not relieved. As she was becoming very ill it was suggested that a cultivation of the blood should be made, and, contrary to expectation, streptococci were isolated. A stock vaccine of streptococcus pyogenes had been inoculated during the preparation of an autogenous variety, with the result as seen on the chart—namely, that the temperature fell to normal within 24 hours and remained there coincidently with a marked improvement in the general health of the patient. (Chart VI.)

This case was amongst the earliest of those which stimulated me in an attempt to combat the effect of an acute streptococcus infection by the use of vaccines, and it serves as an excellent illustration of the condition of affairs which may result from the methods adopted under like circumstances.

A man, aged 28, had a discharge from both ears of many years' standing following an acute attack in the right ear. He came under observation in order that a radical operation might be performed. This was carried out on the right side. His temperature, which was normal before the operation, 24 hours subsequently to the event became irregular without any sign or symptom to account for it, with the exception that the meatal flap had broken down. The irregularity continued and the patient began to show signs of septic absorption, necessitating the reopening of the wound and an exploration of the lateral sinus. This vessel, however, to all appearance was normal with the exception of a little clot around it. The temperature, however, still remained irregular, and the patient complained of pain in his ears and general severe malaise. From cultivations of the pus the streptococcus pyogenes was isolated. Cultivations of the blood were made with a negative result. A stock streptococcus pyogenes vaccine was inoculated with the result that the temperature straightway fell to normal and remained there as indicated on the chart. (Chart VII.)

There is a striking resemblance in these two cases, except that in the former the micro-organisms were present in the blood and in the latter they were not found beyond the local focus. Both were ill with acute fever and marked constitutional disturbance. They may be regarded as borderline cases—namely, those in which the irruption of bacteria into the blood stream was only just beginning or in which the numbers were small or of such little virulence as to be of slight significance; the balance between advance and recovery was insufficient to resist unaided the onset of the bacteria. They are typical cases, both theoretically and clinically, which might well be expected to respond to vaccine-therapy, and the results to my mind justify one's faith in bacterial agents under such circumstances. The same results were obtained on another occasion with a case of the same type and under similar circumstances.

A patient suffering from lateral sinus thrombosis apparently recovered during a course of vaccine-therapy. She, however, returned three weeks later with an abscess outside the dura which burst into the meninges and subsequently caused her death.

INFECTIONS OF JOINTS.

There are two conditions of streptococcus pyogenes infection of the knee-joint, one following an operation for wiring the patella and the other as a result of direct injury. Doses varying from 5,000,000 to 50,000,000 were used in the former case every three to seven days; the chief change observed was a disappearance of the delirium which had been a marked feature and which was uninfluenced by the drainage of the joint and the subsequent use of antistreptococcus serum of the polyvalent type. The lowering of the temperature could be accounted for by the surgical methods adopted, but occurred synchronously with the introduction of the vaccine. (Chart VIII.) In the second case no obvious effect could be recorded with the exception that the patient recovered from the lesion. In neither case was the micro-organism isolated from the blood stream.

INFECTIONS OF APPENDIX.

Seven cases of appendicitis have also been dealt with, the lesions having all been of gangrenous type. In two local abscesses were present and in the others general suppurative peritonitis was associated with the perforation. The streptococcus pyogenes was isolated twice and the streptococcus salivarius was responsible for the remainder, in some instances being obtained in pure culture, but mostly the bacillus coli was also found. Anaerobic bacilli were found in film preparations of the pus in some instances, but not in all. Blood cultivations were only made on two occasions and in each of these a negative result was obtained. The usual surgical methods of incision and drainage were carried out, with the removal of the appendix in three cases, and in two, general peritonitis being present, irrigation of the peritoneal cavity was performed. The vaccine used was of the autogenous variety, and with two exceptions a mixture of the micro-organisms found was given. The doses varied and the methods of inoculation also differed. The usual routine has been to increase the dose, commencing with a 5,000,000 inoculation, with a gradual rise up to 100,000,000, at intervals of two days for the smaller and a week with the larger numbers. In four of the cases the method adopted was to use increasing doses on three successive days and to repeat the procedure at weekly intervals. Five of the cases recovered with their wounds healed completely before they were discharged from the hospital at intervals of six weeks to two months. Two of them, however, died, both being desperately ill with the peritoneal cavity full of pus. It must be remembered that in every instance the lesions were of a severe character, in four of them the patients being under 12 years of age, a time of life when a fatal issue is a common result. Moreover, the streptococcus pyogenes was isolated on two occasions, an infection which in this condition is regarded as productive of the gravest results. During the course of vaccine-therapy, however, they both recovered. In two others the amount of pus was markedly diminished. With regard to the effect of these agents, some benefit appeared to be derived by the inoculation of increasing doses on three successive days, to be followed at a later date by a second similar series. During the inoculation the temperature rose as a rule, falling to normal within the next 48 hours. (Chart X.)

The value of a mixture was illustrated in one case in which the combination of an autogenous coli vaccine with that prepared from the streptococcus appeared to be the deciding factor in the recovery of the patient. (Chart IX.) The results, on the whole, are encouraging and tend to show that some value may be attached to the introduction of antibacterial agents in this condition.

INFECTIONS OF SUBCUTANEOUS TISSUES.

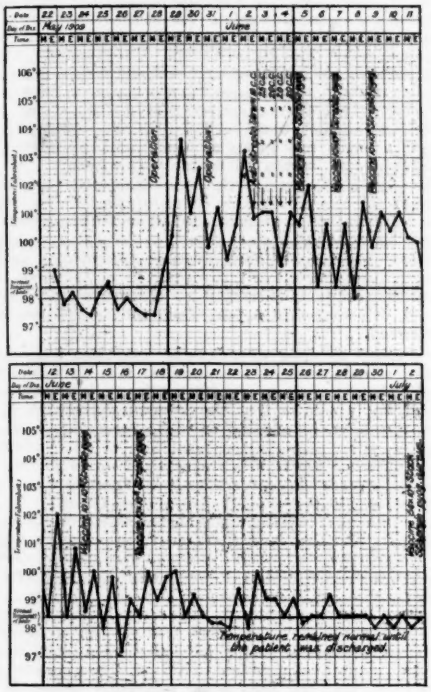
Ten cases of cellulitis in various parts of the body have been met with. One of them is of much interest.

A surgeon whilst performing an operation for empyema pricked his finger and subsequently became very ill with high fever. Incisions were made into the finger and also into the lymphatics of the hand. Such incisions were required on many occasions and the disease had spread upwards towards the shoulder. Fortunately, the surgeon who had originally incised the finger had taken the precaution to make cultivations of some of the blood-stained material obtained from the wound, for when the bacteriological investigations were made five days after the onset of the symptoms the only micro-organism found was the staphylococcus pyogenes aureus. Now it so happened that from the original cultivation a micro-organism was isolated which had all the characters of the pneumococcus, both as regards its cultural and pathogenic properties. From this a vaccine was prepared and inoculated in a 5,000,000 dose into the subcutaneous tissues of the patient. Synchronously with its introduction the temperature, which had previously been raised between 100° and 103° F., fell to normal within 24 hours and remained at that level; moreover, the wounds which had previously failed to heal now did so, and the patient made a speedy recovery. A blood cultivation gave a negative result. (Chart XIII.)

This case serves to illustrate the necessity of making it a routine practice to carry out bacteriological investigations at the time of the original incision into septic lesions, for unless it had been done here the nature of the original infection would never have been demonstrated, and possibly so happy a result might not have occurred.

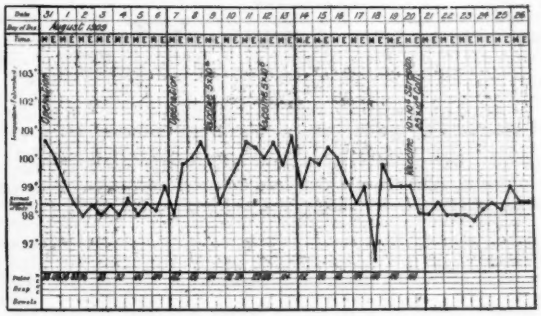
Of the remaining cases, three were lesions of the fingers associated with lymphangitis and enlargement of lymphatic glands. Vaccines did not appear to have any obvious effect on the course of the disease; it is true that it did not spread—a fact of some importance when the streptococcus pyogenes

CHART VIII.



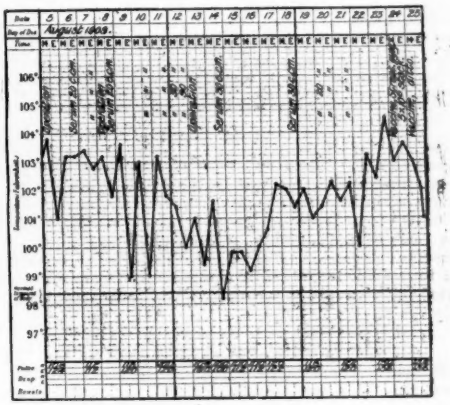
Case of wiring of patella; infection.

CHART IX.



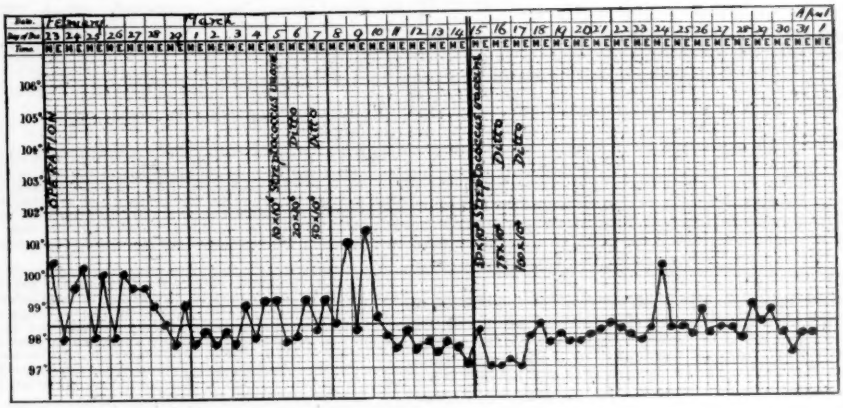
Case of appendicitis, showing value of mixed vaccine.

CHART XI.



Streptococcus infection of foot; lymphangitis; septicæmia; death.

CHART X.



Case of appendicitis. Increasing doses on three successive days, followed by interval.

gets into human tissues. In none were micro-organisms isolated from the blood.

A case of very severe infection of the foot was met with. Unfortunately, the use of vaccine was not suggested until the patient was very far advanced in the disease, for the streptococcus pyogenes was isolated from a single drop of blood withdrawn from a vein. This is a type of condition in which to my mind the use of a vaccine is contra-indicated, for it cannot be expected to be of any service. (Chart XI.)

In two other conditions—one of ulcers in the neck and one of the pinna of the ear—the streptococcus salivarius and anginosus respectively were isolated. An immediate fall of the temperature was noted in each occurring synchronously with the introduction of a vaccine, followed by rapid healing of the wounds. (Chart XII.)

A severe case of suppurative adenitis as a result of infection of the skin is of some interest, for after incision and drainage of the wounds recurrent attacks of fever were seen on three occasions; the wound was washed with normal horse serum introduced through a syringe and vaccine-therapy instituted. A recurrence of the condition did not take place after the introduction of this method of treatment, the wounds healing and the patient making a complete recovery.

The last case of this series is also of interest.

A lesion of the perineum occurred as the result of tearing during childbirth. Subsequently suppuration occurred in this region associated with rigors. In this case a streptococcus was isolated from the blood stream in 1 c.c. on two occasions 14 days apart. At the same time the patient developed suppurative arthritis of the knee and ankle. A cultivation of the interior of the uterus proved that organ to be sterile. By surgical methods the ankle and knee were drained and an autogenous vaccine given on three occasions at weekly intervals, varying from 10,000,000 to 100,000,000 in amount. The patient recovered and was discharged from the hospital some six weeks after her admission.

The severity of the condition is indicated by the short history quoted. There was no obvious effect either on the temperature on in the patient's general condition which can place her recovery as due to these agents.

Similar inoculation methods to those recorded in the treatment of appendicitis were adopted throughout, with somewhat similar results. On 4 occasions the temperature fell to normal by crisis, in 5 cases no obvious effect was observed, in 1 a recurrence of attacks of fever was prevented. Only one patient in this series died.

INFECTIONS OF THE SKIN (ERYSIPELAS).

Erysipelas has been dealt with on 12 occasions. All the cases were of a severe character and associated with very marked constitutional disturbance. In 8 of the cases the skin of the face only was involved; in 3, although the original lesion was in the face area, it spread to the other parts of the body. In 1 case the lesion was on the arm around a vaccinia lesion. In 7 of the cases there was a local suppurating focus, but in the remaining 5 no such abrasion could be demonstrated. From 5 of the cases the streptococcus pyogenes was isolated; in the others attempts were made to cultivate a micro-organism from the bullæ or the spreading edge of the inflammatory process, but in no case was a micro-organism found. There is, however, abundant evidence that the streptococcus pyogenes is the cause of infection of this type. The ages of the patients varied from six weeks to 45 years. The history of the disease varied from four hours to eight days. In 3 of the cases recurrent attacks of the disease occurred before vaccine-therapy was instituted, in 1 as many as 10 exacerbations having presented themselves. The average duration of the disease from the onset of the lesion to the time when the temperature became normal was 14 days. This period appears to be rather in excess and was due to the fact that in two cases the long period of treatment necessary was due to multiple recurrences. If these two are omitted, the average duration would be seven days.

As regards treatment, attention was paid to the bowels, a light diet was instituted, and stimulants were given as indications required. Vaccines were used in 3 cases only without any other form of treatment, in 3 they were used alone for the treatment of recurrences, not having been adopted during the first attacks. In the remaining cases they were used after serum had been tried, but after vaccine-therapy had been instituted the latter was omitted. In three cases the vaccine was obtained by cultivation of local lesions, but in the remainder a stock autolysed vaccine composed of a mixture of streptococcus pyogenes isolated from fatal cases was substituted. The doses were varied intentionally with the object of trying to arrive at some conclusion as to the advantage of the smaller over the larger and *vice versâ*, the range being from 4,000,000 to 50,000,000.

The results seem to indicate that the larger doses were of more value than the smaller, for the sudden fall to normal which occurred on more than one occasion as the result of the adoption of this treatment was characteristic. Once an opportunity was given of treating the disease from the very earliest onset, for the patient was seen within six hours of the appearance of the initial lesion. Unfortunately, the hopes of a speedy resolution were not realised, for the institution of this method of treatment did not appear to have the desired effect, the condition spreading despite the introduction of these agents (Chart XV.). It is possible that too small a dose was given as the initial inoculation. Another case seen within 16 hours tends to confirm this view, for a large dose was given, with the result that the temperature fell to normal within 48 hours (Chart XVI.). In the three cases in which recurrences had made their appearance such were prevented, in one instance the patient having had ten such recurrences during a period of six months, with very severe constitutional disturbances. From the time of the institution of vaccine-therapy no recurrence has taken place, and it is now over a year since the last inoculation was performed.

It is difficult to draw any definite conclusion from the statements already made, as it is not clear that the recovery was due to the use of these agents, it being quite a common feature of the condition that the temperature should fall whatever treatment be adopted or with no treatment at all. The factors which point to the possibility of the vaccine being the cause of the results are summed up as follows: 1. In 5 of the cases the temperature fell to normal within a few hours of the inoculation of the initial dose (Chart XVII.). 2 In four others it fell by crisis as the result of further inoculations. 3. The fact that on three occasions, in which recurrences had been present despite the trial of other methods of treatment, none such appeared after the introduction of these agents. Against this may be placed failure of resolution in the early lesion already quoted. In none of these cases treated did a recurrence follow within a period of six months after the disappearance of the lesion dealt with. 4. The appearance of a condition that has been noted frequently before, but seemed to have especial bearing here—namely, the production of a "kick" in the course of the temperature curve 24 to 48 hours after the introduction of the vaccine. This seemed to depend on the size of the dose, for the larger the dose the greater was the "kick" observed (Chart XIV.). 5. A very marked change for the better in the general condition of the patient In one instance the patient had been delirious for several days: this, synchronously with the fall in the temperature, disappeared within 24 hours. In 2 cases at least death seemed to be impending before the use of these agents was suggested, yet a recovery took place. On the whole my impression leads me to think that vaccine-therapy is of some service in the treatment of erysipelas.

CASES OF SEPTICÆMIA AND PYÆMIA.

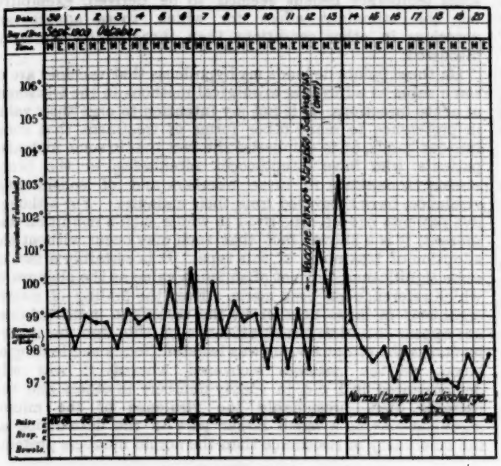
Lastly, let me refer to some cases of pyæmia and septicæmia.

The first is that of a child, 5 years of age, who following scarlet fever developed suppurative conditions in the left wrist, right knee, and the subcutaneous tissues of the leg. Streptococci were isolated from each of these lesions. Vaccine-therapy was instituted in doses of 20,000,000 to 50,000,000 subsequently to a long course of serum-therapy. The temperature began to fall to normal from the time of the initial inoculation of the vaccine and the appearance of fresh pyæmic lesions was prevented.

The second case is that of a man who had recurrent abscesses, making their appearance daily in the subcutaneous tissues of the legs, and associated with high fever. From each of these lesions the streptococcus pyogenes was isolated: blood cultivation was negative. The treatment adopted was the incision of some abscesses and the paracentesis of others. An autogenous vaccine was given in doses varying from 100,000,000 to 300,000,000 at weekly intervals. No recurrence followed from the time of the first injection. The temperature fell to normal after the third inoculation, although it had previously been raised to 101°–103° F.

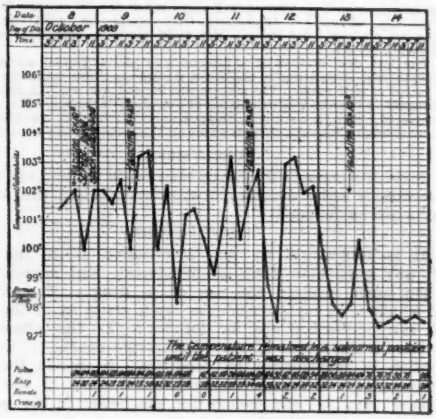
The third case is that of a boy, 3½ years of age, who, subsequently to the removal of his tonsils and adenoids, became feverish. A large number of investigations were carried out with the object of finding

CHART XII.



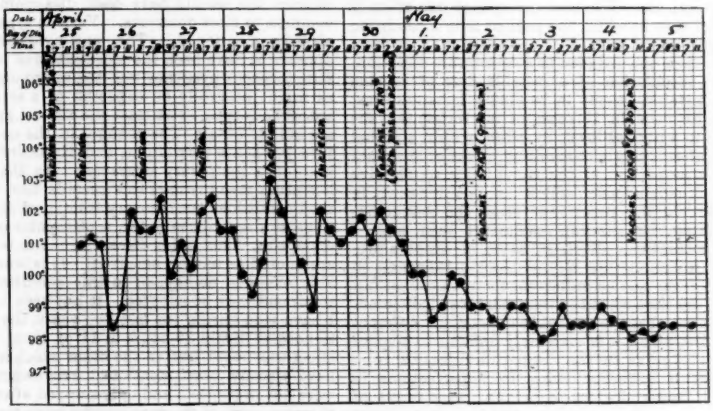
Case of ulcers of the neck

CHART XV.



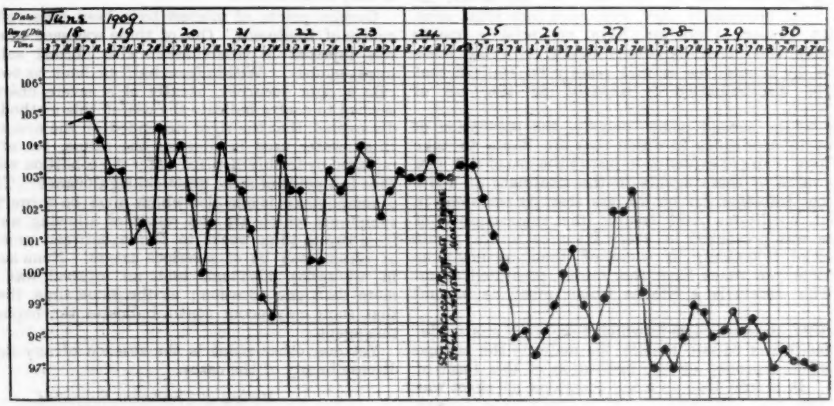
Case of erysipelas. Illustrating the failure of effect of a small dose of vaccine in the early stage of the infection.

CHART XIII.



Case of pneumococcus cellulitis. Fall of temperature and recovery, following initial injections of autogenous vaccine.

CHART XIV.



Showing the production of a "kick" in the temperature curve shortly after injection of vaccine.

the initial lesion without success, and it was not until the streptococcus pyogenes was isolated from the circulating blood-stream that his disease was diagnosed. Doses of vaccine, varying from 5,000,000 to 20,000,000 were given, the temperature falling to normal after the second inoculation, having been previously raised for 18 days. This was the only method of treatment that could be used, for there was no obvious local lesion; the child made a complete recovery (Chart XVIII.).

The last case is that of a patient who had a gluteal abscess with streptococci circulating in the blood stream on three occasions within a period of four weeks. The abscess was incised, and a 10,000,000-dose of autogenous vaccine was inoculated at four days' intervals. The patient recovered, with a complete disappearance of the hip condition, the vaccine having no very obvious effect on the course of the disease.

CONCLUSIONS.

From the remarks that have been made in connexion with the various series of cases it will be recognised that certain facts can be deduced.

Value of Vaccines.

It is impossible to give a criterion as to the value of any particular form of treatment, and especially so when such involves the use of a drug. The grounds on which it is my attention to lay a claim as to the value of vaccine-therapy are as follows: (1) the effect that it has on the course of the temperature chart; (2) the prevention of recurrences in conditions in which they are common; (3) the improvement in the signs of the local disease; and (4) the change for the better in the general condition of the patient.

Taking the first of these, there seems to be quite enough evidence to justify the statement that vaccines do have some influence on the course of the fever in a case of acute infections due to the streptococcus, provided that the original lesion has been efficiently dealt with by surgical methods. The best example of this effect is seen in the type of case in which the patient is in a condition of unstable equilibrium, in which it is necessary to apply some extra stimulus to turn the balance in a favourable direction. The result of the inoculation of a suitable dose of vaccine under these circumstances seems to be almost instantaneous, and it oftentimes happens (in 12 cases of my series) that the temperature falls to a normal level, by crisis, within a period of 24 to 48 hours after a single inoculation. That such should occur in so large a proportion of the cases tends to negative the suggestion of coincidence which is put forward in isolated instances. In the majority of cases the change has not been so striking, but similar results are seen with a second or third inoculation. Even in those in which a prolonged course of injections are required, some influence on the course of the fever can be indicated, for the gradual fall commenced from the time when the treatment was instituted. The variety of these changes probably depend on different factors. In the first place, it is extremely difficult to acquire an accurate knowledge as to the degree of infection from which the patient is suffering owing to imperfections in both clinical and bacteriological technique; as a result of this the size of the dose of dead micro-organisms that should be injected is difficult to estimate. Yet, again, the virulence of the infecting agent plays an exceedingly important part in the disease, and to a certain extent is reponsible for the potency of the vaccine which is used. This being so, the size of the dose of the initial inoculation must necessarily vary with each individual case. Up to the present time we have no reliable means of estimating this most important factor. Taking these two factors by themselves it will readily be realised that considerable discrimination is required in the use of vaccines.

Turning to the second point—namely, the prevention of recurrences in conditions in which they are liable to take place. There is ample evidence to justify the use of this sign as to the value of these agents in the treatment of acute streptococcus infection, for on no less than six occasions in which such conditions were treated the reappearance of the lesions was prevented in every instance as the result of the initial injection; in some of them as many as from eight to ten times have the lesions presented themselves. This surely is a tribute which must be beyond dispute.

Yet, further, in those cases in which a recovery was made, without bias it may be said that in the majority the change for the better depended on the institution of this form of treatment. It is true that on many occasions no effect was observed, but the disappearance of delirium, the sudden interest in environment, the diminution in the production of pus, and the rapid healing of wounds, all speak for themselves. Even in those cases in which a recovery was not made some temporary benefit seemed to be derived, exemplifying the stimulant effect for which these agents are notorious in other conditions than those which are being discussed.

On these points depends my hypothesis that vaccines are of some value as adjuvants to surgical methods in the treatment of acute infections. It is not my intention to urge their value in preference to many other forms of treatment that come into our hands, or to emphasise the fact that in some instances patients who have streptococci circulating in the blood stream, sometimes in large numbers and of considerable virulence, have recovered from their maladies. For although five patients out of nine lived in whom such a condition was present, it is a known fact that such may occur without the adoption of treatment of this type. It is certainly a fact of some significance, but not of so much value as the changes to which reference has been made. Even the finding of micro-organisms in large number by the technique indicated does not appear to add to the significance of this sign, for in two instances the streptococcus was isolated from a single drop of blood, yet the patients recovered, whereas it was only demonstrated in 1 c.c. in scanty numbers in others and the patients died, presumably the virulence of the micro-organism playing a much larger part in the destruction of the machinery of resistance than the actual numbers present.

Value of Serums.

Let me now add a few remarks with regard to the value of serums. In the majority of cases in which use has been made of them the results have been disappointing, an experience common to most observers. Various types have been tried as already mentioned. The anti-pyogenes variety certainly appears to have been the most effective in cases in which the streptococcus pyogenes was the micro-organism of infection, as might naturally be expected of a serum which is of the autogenous type, or at least the nearest approach to it that we are able to obtain. The changes in the course of the temperature *per se* are very slight, and if occurring at all have only been of a temporary character. At the same time, in the literature many remarkable records can be found, including such conditions as recovery from post-mortem wound infections of a severe character, septicæmias of various types, and erysipelas. This latter disease is one in which the best results are quoted as having occurred. It is true that many remarkable changes do happen in this condition whatever form of treatment may be adopted. It has been used in 13 cases that I have seen during the last two years, the temperature falling to normal within 24 hours in 11 of them. In one no obvious effect was noted, and in the other which is among those which have already been mentioned, recurrences of the condition were not prevented, and only stopped after the use of vaccine-therapy. All of these recoveries were made in lesions of the mildest form of the disease, the severe conditions being selected for vaccine-therapy. In puerperal septicæmia, again, much use has been made of this form of treatment, but on the whole the general opinion held is that its value is very small indeed.

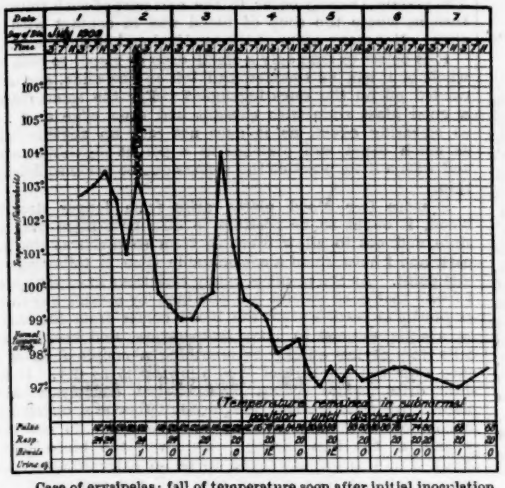
Certain points of interest have been observed during the course of treatment. One of these was seen when the serum was injected in combination with normal saline solution intravenously. Within from half an hour to two hours as a rule a rigor occurred, usually of a severe character. This seemed to contra-indicate the use of this method until it was discovered that the rigor depended on the action of the distilled water used in diluting the saline, for after this was replaced by freshly distilled water the condition was prevented. This is a point of some practical significance. The condition of anaphylaxis is one also which must be borne in mind, for symptoms which are the result of allowing an interval of from two to three weeks to elapse between successive doses of serum may be of a serious nature. None such occurred in my series, although such an interval was allowed on more than one occasion; at the same time, the knowledge that such may occur contra-indicates the haphazard use of this agent.

Yet one other point is the absence of any sign of serum disease in any of the cases.

Method of Treatment Suggested.

In conclusion, let me indicate what in my opinion is the

CHART XVI.



Case of erysipelas; fall of temperature soon after initial inoculation of large dose of vaccine.

ideal method of approaching a case of infection due to the streptococcus.

First, the clinical diagnosis should be accurate to the smallest detail, the signs and symptoms being carefully noted both as regards the local and general condition of the patient. The help of the bacteriologist should be sought for in all cases, however trivial they may appear to be in the early stages, and as soon as it is recognised that he can give some information both as to diagnosis, prognosis, and method of treatment.

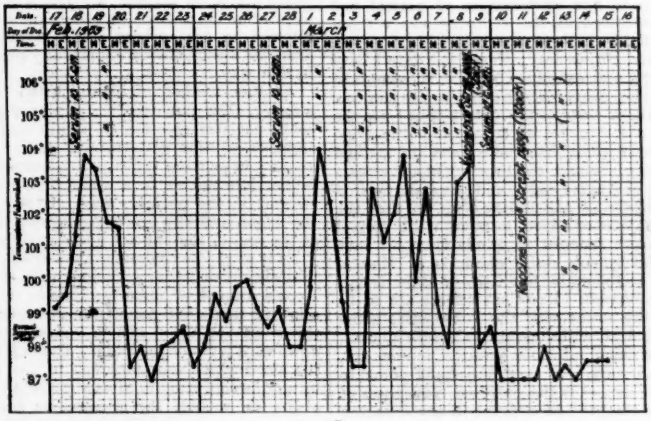
Having dealt with the lesion surgically the necessity for the use of the artifical methods of stimulation of the machinery of resistance must be discussed, and if decided on it must be requisitioned as soon as possible.

Serum should be given at the earliest possible opportunity for its action to be effective. It can be used locally as a dressing, intravenously, subcutaneously, or by the rectum. Intravenous inoculation in combination with normal saline solution should be used where it is desired to get a rapid effect. The doses should be as large as 75–100 c.c. and repeated if necessary. This should be followed by subcutaneous injections of 50–100 c.c. per diem. The type of serum that should be used is that which most nearly approaches the autogenous variety. The serum obtained from the blood of a patient who was recovered from an acute streptococcus infection has been successfully utilised in the treatment of a similarly infected patient on more than one occasion, and still further, friends have been known to artificially immunise themselves against the micro-organism causing the disease, and submit to a withdrawal of their own serum.

Following the use of the serum, or in combination with it, a vaccine should be injected as soon as it has been prepared. As a general rule an autogenous agent is preferable for the reasons already given, but it may be replaced by one prepared from a mixture of streptococci of the same type which are known to commonly cause the type of lesion from which the technique used has failed to isolate it. Moreover, stock vaccines may be used during the preparation of the autogenous agent. Should a mixture of different bacteria be found in the lesion a vaccine prepared from such a mixture is always indicated. With regard to the dosage it is impossible to lay down an absolute rule. There are indications that if a patient is seen in the very earliest stage of the disease, and maintains a good general condition while the focus of infection is still localised, then a relatively large dose of vaccine may be given; but, on the other hand, if the general condition is bad, and the lesion is becoming generalised, then a small dose is indicated as the initial inoculation. In other words, the more acute and the more generalised the lesion the smaller should be the dose introduced. Having obtained no effect as the result of the smaller dose it should be increased gradually until such is reached which will produce the desired reaction. On the other hand, if a harmful effect is observed, then a smaller dose is indicated, or even vaccine-therapy contra-indicated.

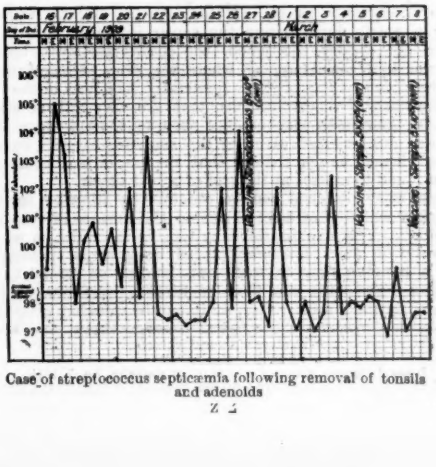
If this course be adopted then I think it will be realised that vaccine-therapy and serum-therapy are at least useful adjuncts to our ordinary methods of surgical treatment, not only in those cases in which these have failed, but as a routine.

CHART XVII.



Case of erysipelas. Fall of temperature a few hours after inoculation of initial dose and after serum-therapy had been tried.

CHART XVIII.



Case of streptococcus septicæmia following removal of tonsils and adenoids

CLINICAL NOTES ON BLOOD PLATES.

BY E. M. BROCKBANK, M.D. VICT., F.R.C.P. LOND.,
HONORARY PHYSICIAN, ROYAL INFIRMARY, MANCHESTER.

VERY many papers have been written on the subject of the bodies met with in normal and pathological blood which have been called blood plates or platelets. An excellent account of them is to be found in Dr. G. A. Buckmaster's book on "The Morphology of Normal and Pathological Blood" (1906). Several bodies have been described as blood plates, and Dr. Buckmaster divides these into four groups: (1) Platelets containing and (2) destitute of hæmoglobin; (3) with an inner body and (4) without an inner body. He concludes, after an exhaustive consideration of the subject, that they are artefacts, or pathological bodies, which separate from plasma, especially after the blood has been treated with so-called fixing and indifferent fluids. On the other hand, a small number of observers have maintained that blood plates arise from the red cells, and Hirschfeld, especially, illustrates and supports very well this theory by coloured drawings.[1] Preisich and Heim also show illustrations of the extrusion of platelets.[2]

More recent workers on the continent are supporting the view that the blood plates are a third element of the blood, and that they play an important part in the production of alexin and antibodies in the mechanism of immunity.[3]

I have myself taken a good deal of interest in the nature and origin of these bodies as found clinically in dried or film preparations of blood. In March, 1908, in a short paper,[4] with microphotographs as figures, I supported the view that those bodies met with in film preparations of normal and pathological bloods, smeared in the ordinary way without the admixture of any fluid whatever, and called blood plates, were extruded from red corpuscles. Since that date I have made, in different ways, and examined several thousands of blood slides, and now offer some further notes on the subject.

I should like to make it clear at the outset that I use the term "blood plate" for the bodies which are found in dried film preparations of blood which have been fixed and stained only. I have purposely avoided treating my blood smears with anything beyond the fixing agent and the stain (or in a few instances the moisture of the breath also), so that the chances of new combinations of added salts with the normal blood constituents can be reduced to a minimum. I have worked chiefly with Leishman's stain, which is a reliable, simple, and generally useful stain, but Giemsa stain brings out the blood plates very well. Excellent effects are to be obtained by treating the smear with the latter after using Leishman. I have also fixed with formalin, absolute alcohol, heat, osmic acid 1 per cent., mercuric chloride, iodine, &c., and stained in various ways. A very important point to which I have paid due respect is the extreme fragileness of the blood plates, and their habit of clinging to any smearing agent, in consequence of which I believe I have obtained some of the striking results my slides show.

A very good way to get platelets is to put a small drop of blood on a grease-free slide, allow it to stand about 20 seconds, and then smear *as lightly as possible* with glass slide or cigarette paper. If the slide be slightly warmed over a spirit flame before the smear is made, care being taken not to dry the blood, the results are even better. Swarms of platelets appear where the drop of blood rested on the slide and less of them (generally very few) in the rest of the smear, probably because they are very adherent and because their small size enables them to remain where they are and not be wiped along by the smearing agent. In this respect it may be pointed out that the larger leucocytes are often found in masses at the end of a bad smear.

Even more platelets can be obtained by allowing for the tendency which they have to rise to the surface of the drop of blood. This can be done by turning the slide, on which the drop of blood has been placed, downwards—making it into a hanging drop in fact—and holding so for 20 to 30 seconds. The slide can then be turned right side up and smeared in the ordinary way, or it can be smeared with very good results with a glass slide whilst in its reversed position. The platelets mostly occur in the first part of such smears—that is, where the drop of blood was in contact with the slide. Not many occur at the terminal end of the smear.

It is better to take only a small drop of blood, so that the whole of it can be smeared and left on the slide, and none carried off on the smearing agent. For the same reason, a good glass slide with straight and even edge acts best as smearing agent, as it does not pick up anything like as much blood and platelets as a porous cigarette paper, and with a little practice the smears can be made sufficiently thin.

If more free blood plates arise from longer standing blood, it ought to be possible to distribute them over the slide and not to allow them to form so much at the first part, and I have spent a considerable time in following out this point. As the result of many variations in experiments, I found that good results are obtained by making the smear *as quickly as possible* after the blood comes from the finger, on a slide warmed to body temperature, and keeping the cells from drying quickly by breathing a couple of times at once over the smear, and then allowing it to dry. If the slide dries before being breathed on hæmolysis takes place. By this method the blood plates are distributed much more uniformly all over the smear and do not congregate at the first portion. Moreover, the blood plates obtained in this way are found to be so extraordinarily fine and perfect that they support very well the contention that they are a third element of the blood. But there are many of them to be seen, also, *in* the red corpuscles like delicately formed nuclei-suggesting bodies of pale blue body work and neutrophile granules. Large and very perfect platelets are found scattered all over a smear which is made as quickly as possible on a slide at the temperature of the room, and allowed to dry without being breathed on. In secondary anæmias, again, they are unusually plentiful in a smear made in this way.

Another method of obtaining the blood plates is to prick a finger, then put over the puncture a minute drop of 1 per cent. aqueous solution of osmic acid, or a 10 per cent. aqueous solution of citrate of soda, and squeeze into this about four or more times as much blood. The drop of blood is then touched on to a glass slide and smeared, fixed, and stained in the ordinary way. It is not necessary to clean the finger specially before puncturing it, and slight punctures at the root of the nail are quite enough.

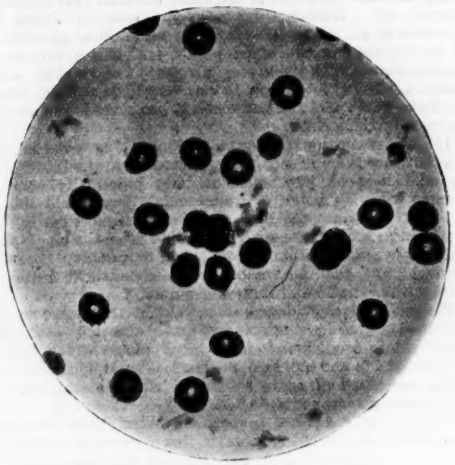
As it might be contended that these platelets are artefacts, in the sense that they are rolled up in the process of smearing, I put a drop of blood on the slide in the usual way, and after allowing it to stand hanging downwards for 15 seconds or so, threw off the blood not in contact with the slide by sharp downawark jerks of the slide. The object of this was to leave the blood which was adherent to the glass slide untouched by any foreign body used as a smearing agent, and in as thin a film as possible for microscopic examination afterwards, and it succeeds very well, especially in the thin blood of anæmia. The same end can be gained by gently washing off the excess of blood with a drop or two of isotonic saline solution, and also, though not quite so successfully, by pouring Leishman's stain on to the drop and washing off the supernatant blood. After any one of these processes the film is fixed and stained with Leishman in the ordinary way. When examined, these thrown films are very thick, especially in normal blood, the corpuscles being in masses, but in the clearer spaces between very fine blood plates are found.

Very perfect blood plates can also be obtained by touching with a slide the drop of blood on the finger and then wiping the slide along the top of the drop of blood. A smear so made is somewhat thick, but large numbers of blood plates are found all over it, and in secondary anæmias they are extraordinarily plentiful.

Appearance of blood plates.—Well-formed blood plates have a protoplasm-like body work which stains faintly blue with Leishman's stain, and in this are granules, or more or less closely aggregated masses of "chromatophile" substance which always stains neutrophile, never the true nuclear blue. The chromatophile masses have not the clearly demarcated outline or solid body work of a nucleus. The whole appearance of a good blood plate is suggestive of an imperfectly developed or primitive white cell. In size they may even be about half the diameter of a red corpuscle, but as a rule they

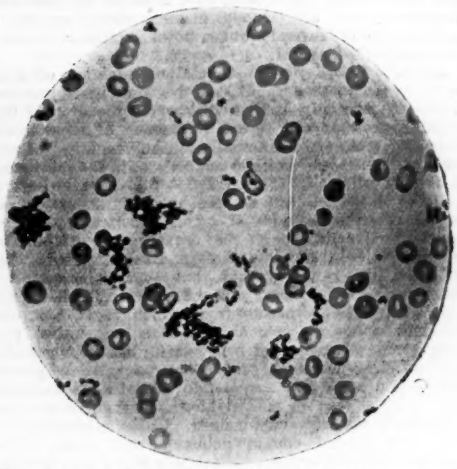
[1] Virchow's Archiv, vol. clx.
[2] Ibid., vol. clxxviii.
[3] See Aynaud: Annales de l'Institut Pasteur, No. 1, 1911.
[4] Medical Chronicle (reprinted in the Dreschfeld Memorial Volume, 1908).

FIG. 1.



Microphotograph showing two burst red corpuscles.

FIG. 2.

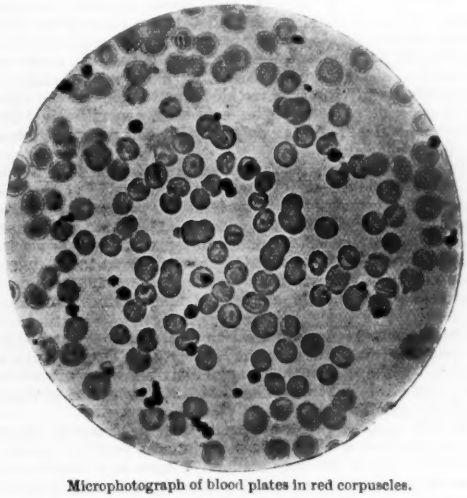


Microphotograph showing blood plates leaving burst corpuscles and also in them.

FIG. 3.

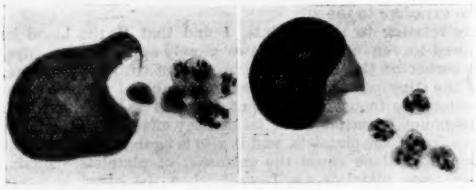
Microphotograph showing burst red corpuscle.

FIG. 4.



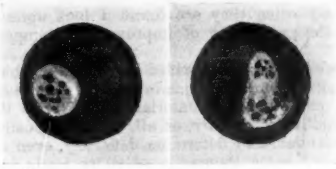
Microphotograph of blood plates in red corpuscles.

FIG. 5.



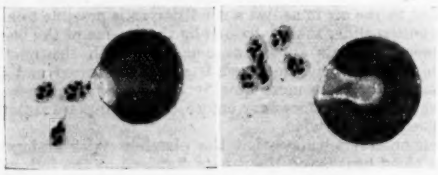
Burst red corpuscles with extruded blood plates.

FIG. 6.



Blood plates in red corpuscles.

FIG. 7.



Burst red corpuscles with extruded blood plates.

FIG. 8.

Burst red corpuscles with extruded blood plates.

are much smaller. The blood plates which are seen in ordinary blood smears, as a rule, have none of the protoplasm body-work, but are merely masses which suggest the aggregation of several broken-down granular bodies of chromatophile material.

Origin of blood plates.—Careful examination of smears made by the methods and with the precautions previously described, especially at that part where the drop of blood originally rested, will reveal very many of these bodies, lying either close to, or actually in, the "mouths" of manifestly "eviscerated" or burst red cells, or in the substance of an unburst cell itself. (Figs. 1, 2, 3, 4, 6) That the latter are not lying on the cell can be seen by careful focussing; and they have an appearance of being imperfectly developed nuclei of red cells, though they are always neutrophile and not basophile in staining affinity. Examination of slides will show that not only one, but sometimes several of these bodies have come out of one red cell. (Figs. 3, 5, 7, 8.) The corpuscle from which they have come not only stains as well as the other corpuscles, there being apparently no loss of hæmoglobin, but they even often show no clear unstained centre like many red corpuscles, especially in secondary anæmia, do. Whilst these appearances can be seen in normal blood, they are much more plentiful in any secondary anæmia. The "eviscerated" or burst cells remind one of dehiscent seed pods, or are apparently like the explosive blood cells which are described as occurring in the blood of cray fish.

Not only can the blood plate be seen coming out from a red cell which has retained most of its hæmoglobin (as a matter of fact this never escapes and stains outside the red corpuscle unless slight hæmolysis has taken place, when there may be seen a diffuse eosin tint around the corpuscles), but not uncommonly, also, after hæmolysing the dry smear by breathing once on it. After staining a hæmolysed smear in the ordinary way one or more blood plates can be seen lying apparently in, or just at the mouth of, a manifestly burst envelope, which, retaining only very little of its hæmoglobin, scarcely stains at all.

To anyone who studies the appearance of such slides there can be no possible doubt that the bodies which I describe and figure are extruded contents of red corpuscles, nor can there be any doubt that the blood plates which are seen in the red corpuscles are in the substance of the corpuscle. Careful focussing shows that this is so, and that the platelets have not been swept by the smearing agent into the concavity of the corpuscle, as Aynaud and others maintain is the case.

I have never seen any indication whatever that the bodies in question ever arise from leucocytes. Occasionally a ruptured white cell with granular detritus lying around is seen, but never anything like a blood plate. Nor is there any indication that they are of plasma origin.

In bad cases of primary anæmia with hæmoglobin index over normal these appearances are almost entirely absent, and blood plates are very scanty. I have only found them plentiful in one bad case of supposed pernicious anæmia out of at least 20 examined. As far as my observations go blood plates may occur in early stages of these primary anæmias, and when they are found I look upon them as indicating the probability of improvement, temporarily, at any rate.

From these facts one is justified in concluding that normal red blood-cells, when they come in contact with the air on a glass slide, put out some material which forms the blood plates. Whether some only, or all, of the red cells do this I have been unable to determine definitely, even after the examination of some thousands of slides made in various ways; but my observations apparently at present show that only some of the normal red corpuscles can put out the material. At the same time there is no definite evidence to prove that all red corpuscles do not contain it, and, as a matter of fact, I have stained some smears in which nearly all the red corpuscles do show what is a possible blood plate. But I cannot produce the effect at will, and it may only be an "artefact" effect.

Composition of the blood-plate material.—I have not been able to go into this matter thoroughly, and only offer now a few notes on what I have observed. The fact that the body-work of the blood plates stains a pure blue like the protoplasm of the large mononuclear leucocytes suggests that it is of a protoplasm-like nature. But from its extreme friability it probably is not as highly organised as true protoplasm.

The granular, chromatophile material is always neutrophile, therefore it is not of the same material that nuclei are formed of. Ehrlich's hæmatoxylin scarcely stains the platelets at all. Israel-Pappenheim stain shows no evidence of hæmoglobin in the blood plates, and iodine only stains small globules with the glycogen reaction and not the whole platelet. Nile blue sulphate has very little staining effect, nor have osmic acid and scharlach R., so there is probably no fatty material in them.

In this connexion the most striking thing to my mind is the fact that there is such a large increase in the blood-plate material in secondary anæmias, and practically none in anæmia with Hb index above normal. Why should this be so? Is it because anæmic corpuscles burst more easily than those with excess of hæmoglobin, or because the blood-plate material is a regeneration product, and represents "potential hæmoglobin," that is, some protein constituent ready to unite with hæmatin and form hæmoglobin?

There is distinct evidence, then, that at least some normal red blood corpuscles contain some material which is extruded under certain conditions to form blood plates which contain no hæmoglobin and no true nuclear material, but which are partly composed of some substance which stains like the protoplasm of lymphocytes.

Structure of red blood corpuscles.—What light does this evisceration of the red corpuscles throw on their structure? It seems to suggest that the red cells—at any rate, those from which the blood plates come—consist of an envelope and contents, and are not of a spongy structure. The appearance of the burst red cells, of the material being extruded, of the "finished" form of the platelet, and of the platelets in the red cells suggests that it is improbable that the material can come from the meshwork of a sponge-like structure, but that it must come from a body with one common envelope and more or less viscous contents. Evidence of this envelope can often be seen in the ruptured corpuscles, a colourless membrane appearing about the "mouths" of the burst cells, as shown in Figs. 5 and 7.

The appearance of these dried blood films suggests that we have an outer limiting, clear, colourless envelope formed of homogeneous material and lined with a thicker coating of hæmoglobin and its solvent or retaining agent. Whatever this may be, it is not water only, for there is too much hæmoglobin in a red corpuscle for water alone to dissolve. Finally, within this hæmoglobin lining in some, or all, of the normal red corpuscles, and certainly in many more corpuscles with deficiency of hæmoglobin, and in very few with excess of hæmoglobin, there is the blood-plate material.

Are blood plates a third element of the blood?—A considerable amount of discussion has taken place as to whether blood plates exist in the blood as preformed third-cell elements as it circulates in the uninjured blood-vessels. This seems to me to be a very difficult question to settle, but all my own limited observations seem to show that they are only put out after the blood leaves the vessels or after it has been exposed to air and is dying. The extrusion of the platelets, to my mind, may be due to contact with some material derived from the injured tissues traversed by the blood as it leaves a puncture, to contact with a glass slide, or to exposure to the air.

As relating to these points, I find that if the blood be allowed to run up between two closely applied cover-slips, the corner of the slips being in contact with the puncture, and the slips be then separated in the usual way, very few platelets are found. This point suggests that contact with glass is not essential to, if it has any effect at all on, the formation of the platelets, and it also is against the view that tissue fluids alone cause the extrusion of platelets. Again, many more platelets are formed when the blood is freely exposed to the air, up to 30 seconds, as compared with the numbers present when a smear is made as quickly as possible after the blood exudes from the finger. This fact seems to me to show that the longer the corpuscles remain freely exposed to the air in as live a condition as is possible to keep them on the slide, that is bathed by the plasma of the blood, the more platelets appear as compared with the number which is seen when the blood is quickly smeared and the corpuscles therefore more quickly killed. Some process of oxidisation may be necessary before the blood-plate material is formed and extruded.

Some observers believe that the platelets exist preformed in the blood because of the results obtained by the following type of experiment. Into a hypodermic syringe is drawn

1 c.c. of 10 per cent. solution of citrate of soda or some similar "indifferent" fluid. The citrate of soda solution having been driven to its point the needle of this syringe is then plunged into the lumen of a distended vein on the arm, care being taken to avoid injuring the tissues as much as possible, and therefore to reduce the presence of any thrombokinase to a minimum. About 9 c.c. of blood are drawn into the syringe, mixing with the citrate. The needle is then withdrawn, and the contents of the syringe are expelled into a paraffined test tube, which is then placed in ice. In about an hour's time a layer of clear fluid rises to the top of the blood mixture in the test tube, and if a drop of this be taken on a platinum loop and put under a microscope on a glass slide, and examined with a 1/6th inch lens, and without a cover-slip, swarms of blood plates can be seen in the fluid, especially in those parts most free from red corpuscles.

These platelets have movement which apparently arises from their own action. Most are globular, some are fusiform. Having taken all these precautions to avoid injury to the tissues and the introduction of thrombokinase, which might determine the formation of the platelets, the conclusion is drawn that they must exist preformed in the blood. My criticism of this conclusion is that the corpuscles have been withdrawn from a blood-vessel and have been exposed to the air, and the change of environment is, in my opinion, a most likely factor in causing the red corpuscles to burst and discharge the blood plate content.

The conclusion I come to, then, as a result of a prolonged series of observations, is that the bodies met with in blood smears which have been fixed and stained in the ordinary way, and known as blood plates, all arise from the interior of red corpuscles, many of which manifestly burst as the blood plate material escapes from them.

Living blood plates.—Blood plates can easily be seen living and moving apparently with some inherent motile power. The simplest way to see them is to prick the finger through a very small drop of 10 per cent. citrate of soda solution and let about three times the bulk of blood mix with the citrate. Then take a small drop of citrate solution on a slide and turning this downwards touch the top of the blood on the finger with the drop of citrate on the slide so as to take up a little of the blood from the finger into the drop on the slide, and thereby to dilute the blood considerably. If this diluted blood then be examined without a cover-slip under a 1/6th inch lens, blood plates can be easily distinguished amongst the red and white corpuscles. They are mostly globular, but some are apparently fusiform. They move about the field and the movement is not due to drift or attraction towards the red corpuscles.

In conclusion, I wish to thank Mr. Frank Oppenheimer for his excellent drawings of the blood plate appearances, and Dr. David Orr for two of the microphotographs.

Manchester.

IS THERE A DIRECTLY RHEUMATIC FORM OF ULCERATIVE ENDOCARDITIS?

BY CAREY F. COOMBS, M.D. LOND., M.R.C.P. LOND.,
ASSISTANT PHYSICIAN, BRISTOL GENERAL HOSPITAL.

No one disputes the fact that cardiac rheumatism predisposes to ulcerative endocarditis, but the exact manner of this predisposition is contentious ground. Sometimes bacteriology proves that the relation is nothing more direct than a predisposition; the rheumatic infection has vascularised the valves and made ready a path for the entrance of other micro-organisms, such as bacillus influenzæ or the pneumococcus. But is the relation between the two kinds of valvular infection of this indirect order in every instance? The infective agent concerned in rheumatic carditis is a streptococcus; and streptococci provoke a large share of all cases of valvular ulcerations. In many cases of streptococcal destruction of the valves, and particularly in the chronic variety which often follows close on the heels of rheumatic attacks, the micro-organisms behave on artificial media in such a way that some think they should be included in the same group as those which Poynton and Paine have associated with rheumatism. In such cases, too, the clinical picture recalls that of rheumatic infection, since in both there are arthritic phenomena and subcutaneous inflammations. These intimate links between the two have led many (myself[1] among them, it must be confessed) to believe in the capacity of the rheumatic infection to inflict upon the valves a more destructive attack than is its wont—in other words, to cause, directly and unaided, ulcerative endocarditis. It is a strong case, and remains so even when allowance is made for three facts: the uncertainty of cultural tests as a means of classifying streptococci, the discovery that other organisms (e.g., bacillus influenzæ) can produce the same clinical picture as that which is often associated with streptococci of a mild virulence, and the capacity of almost any blood infection to produce polyarthritis and even inflammatory lesions beneath the skin.

Hoping to find the histological changes of rheumatic infection in those cases which were closely associated with rheumatism clinically, I have made a full microscopical examination of seven cases of ulcerative endocarditis due to streptococci. The principal features of these are given in the accompanying table. For permission to use the clinical and bacteriological notes I am indebted to my colleagues at the Bristol General Hospital and to Dr. Thomas Lewis, of University College Hospital.

The histological findings may be briefly summed up as follows.

Endocardium.—In the ulcerated areas the necrotic layer on the surface was thick; upon it, again, lay masses of fibrin and cocci, the latter easily demonstrated and Gram-positive as a rule. In the more chronic cases the valvular endothelium displayed proliferation, as did also that of the vessels always to be found in inflamed valves. Around these vessels, beneath the ulcerated surface, and throughout the substance of the valve generally, there was an intense leucocytosis of the polymorphonuclear type. Beneath the ulcerated areas, and in some instances throughout the valve, there was dense fibrosis, especially in the more chronic cases. Sometimes cocci were found in the depths of the valve as well as on the destroyed surface.

Pericardium.—In no case was there any evidence of recent inflammation, though in several the subendothelial tissues of the visceral layer were thickened after the manner usual in cases of post-rheumatic fibrosis of the heart.

Myocardium.—While segmentation and cloudy swelling of the muscle cells were usual, spots of inflammatory reaction were only found with difficulty; in at least one of the hearts no such foci were to be seen anywhere. Those that were discovered were "suppurative" in type—that is, the chief feature was exudation of polymorphonuclear leucocytes, as in any pyæmic infection of the cardiac muscle. In no single case were there any of the submiliary nodules which have been shown to be so characteristic a feature of rheumatic carditis.

Attention must be drawn to three sets of facts relative to these data.

1. In all the hearts the changes were substantially the same; they varied, it is true, in intensity, but not in nature. Some of the cases, such as No. 34, were as "rheumatic" as could be; in others—e.g., No. 18—there was no hint of the rheumatic taint. Yet this made no difference to the histological findings; streptococcal ulceration of the endocardium is one and the same disease so far as the type of inflammatory reaction is concerned, whether there is an overpowering history of preceding rheumatism or whether there is none at all.

2. The myocardial foci in these cases are like those of pneumococcal or staphylococcal carditis, both in their comparative rarity and in their essentially suppurative nature.

3. On the other hand, the differences between these hearts and the typical rheumatic pancarditis are very definite. First, the endocardium was much injured, the myocardium slightly and as it were by chance, and the pericardium not at all; secondly, focal inflammations of the muscular tissues when found were different from those of rheumatic carditis. In the latter disease all three parts of the heart show "submiliary nodules," i.e., foci of inflammation essentially similar in kind and degree, and "characterised by the presence of fibrin and of certain large, often multinuclear, cells. There are also lymphocytes and other less characteristic cells" In the paper[2] from which the above words are

[1] THE LANCET, Feb. 27th, 1904, p. 565.
[2] Journal of Pathology and Bacteriology, 1911, p. 489.

quoted there is a full account of these foci and of the similar phenomena seen in other rheumatic lesions.

Let it be assumed for the moment that by some variation in its environment or difference in the manner of its entrance to the circulation, or by some other varying factor of unknown nature, the streptococcus which ordinarily provokes the rheumatic type of lesion may sometimes fasten on the valves alone, flourishing and multiplying there until it has compassed the death of its host; in such cases the infected valve will have become a kind of culture medium for the streptococcus of rheumatism. This amounts to an inoculation into the circulation, of more direct value than that of experimental research, for it is the human subject that is concerned, and not a small animal. When (as in Cases 11, 32, and 34, which might reasonably be regarded as "rheumatic" on clinical grounds) this supposed rheumatic organism found its way into the myocardium, which it did but rarely, what was the result? The rheumatic type of focal inflammation? Not so. The reaction was an ordinary "suppuration," just like that which is seen in the cardiac muscle in cases of pneumococcal pericarditis, or in generalised staphylococcal infections (osteomyelitis, &c.).

2. The streptococcus rheumaticus has undergone changes which make it capable of causing progressive destruction of the valves without inflicting a similar degree of injury upon the other parts of the heart. These changes may be due to variations in its environment before or after it enters the circulation, or to the way in which that entrance is perpetrated. Since severe cardiac rheumatism (i.e., acute pancarditis differing from the usual rheumatic type only in its unwonted severity) is a rapidly fatal disease, and ulcerative endocarditis only tardily so, it seems that this alteration cannot be a mere exaltation of virulence.

3. The streptococcus rheumaticus has entered the circulation in its usual form and by the usual path; but it has discovered a heart so far varying from the commonplace that its attack results in valvular destruction and not in the accustomed diffuse inflammatory reaction.

Before a choice can be made between the above alternatives we must possess ourselves of more knowledge of the differences between streptococci, their habitat in the body, and their ways of gaining access to the circulation. Until there is agreement as to these matters any attempt to

Table giving Results of a Histological Examination of Seven Cases of Ulcerative Endocarditis due to Streptococci.

Case No.	Sex.	Age.	Rheumatic history.	Duration of final illness.	Symptoms and signs.	Streptococci where found.	Condition of heart post mortem.
11	F.	27	Rheumatic fever at 24.	4 months.	Hectic fever. Embolism of brain and other organs. Mitral regurgitation.	In microscopic sections of ulcerated endocardium.	Fibrosis of mitral valve, slight of aortic valve. Small warty vegetations on mitral valve and wall of left auricle. Pericardium normal.
16	M.	42	Doubtful.	About 4 weeks.	High remittent fever. Diarrhœa. Aortic regurgitation.	In sections of ulcerated valves.	Large vegetations on aortic and mitral valves.
18	M.	52	*Nil.*	Doubtful; not more than a few weeks.	Rigors; high remittent fever. Petechiæ. No cardiac signs.	In sections of ulcerated area of left ventricle wall and of myocardial depths (intracapillary masses of cocci).	Large vegetations on aortic valves and neighbouring part of left ventricle wall.
26	M.	22	,,	4 months.	Continued intermittent fever. Leucocytosis. Casts in urine. Pain over spleen. Petechiæ. Painful erythematous patches on fingers. Mitral regurgitation.	Grown from blood during life. Present in sections of ulcerated mitral valve.	Left pleural adhesions; advanced ulceration of mitral valve and early destruction of aortic valve.
32	F.	40	Subacute rheumatism at 37 and 38.	9 months.	Slight irregular fever. Wasting. Aortic regurgitation.	In microscopic sections of ulcerated valves.	Fibrosis of mitral valve; ulceration of mitral and aortic valves.
34	F.	18	Rheumatic fever at 15, chorea at 16, with rheumatism on and off till final illness began. Rheumatic attacks with crops of typical subcutaneous nodes.	About 6 months.	Transition from rheumatism to fatal illness imperceptible. Wasting. Slight but continuous fever. Erythematous plaques on fingers. Mitral regurgitation (present for two years before onset of final phase).	Present in sections of endocardial ulcers and of suppurative focus in wall of right ventricle.	Old pericardial adhesions. Warty vegetations on mitral valves, wall of left auricle, and papillary muscle of left auricle.
38	M.	52	*Nil.*	Over 4 months.	Wasting. Irregular fever. Leucocytosis. Hæmaturia. Mitral regurgitation.	Grown from blood during life. Present (indistinctly owing to prolonged hardening) in mitral ulcerations.	Old pericardial adhesions. Fibrosis of mitral valve, with ulceration of mitral valve and wall of left auricle.

These cases are too few in number to exclude completely the possibility of a purely rheumatic form of ulcerative endocarditis; but they do suggest that we have no right to assume the existence of this form in any given case of ulcerative endocarditis because it is streptococcal in origin and shows an intimate association with rheumatic phenomena clinically. We are, therefore, still looking for an answer to the question which forms the title of this paper. There are three possible lines of solution.

1. The streptococcus of rheumatism not only injures the valves and thereby lays them open to invasion by any blood-borne micro-organism, but also it interferes with the general resistance of the body to other forms of streptococcal infections. The result of this double blow at the cardiac defences is "streptokokkensepsis" of the heart, as the German observers (Jochmann,[3] Steinert[4]) hold. According to this view, rheumatic infection does not directly cause streptococcal ulceration of the endocardium, but prepares the way for it.

[3] Münchener Medizinische Wochenschrift, 1912, p. 436.
[4] Ibid., 1910, p. 1927.

balance evidence would be premature. The above histological facts are recorded here as casting some doubt on the *direct* causation of ulcerative endocarditis by rheumatic infection. This being a doubtful point, conclusions as to the bacteriology of rheumatism which are drawn from cases of ulcerative endocarditis are to be deprecated. In order to reach a fixed and generally acceptable knowledge of this matter, bacteriologists must be content to argue only from researches into cases the rheumatic nature of which is incontrovertible. This may seem to delay needlessly the solution of a pressing problem; but the delay is only apparent, for a good deal of the hesitation which some bacteriologists express in accepting the specificity of the streptococcus rheumaticus springs from a feeling that not all the cases from which this organism is said to have been isolated can be accepted as truly rheumatic. Once there is agreement as to the justice of the claim made for this micro-organism as a cause of obviously rheumatic phenomena, it will be possible to venture outside the inner circle of definitely and incontrovertibly rheumatic lesions into the surrounding territories: into the realm, that is, of conditions such as

chronic ulcerative endocarditis, whose rheumatic origin is as yet open to reasonable doubt. Unless the argument proceeds from the known centre to the uncertain periphery, the result will be confusion and delay.

Summary.—1. The hearts from seven cases of streptococcal ulcerative endocarditis have been subjected to a thorough histological examination. 2. The findings in all the cases were substantially identical, in spite of wide clinical differences in their virulence and in their relation to previous rheumatism. 3. No histological evidence of a directly rheumatic origin was forthcoming, even in those cases in which the rheumatic factor was most in evidence clinically.

Clifton

A CASE OF CONGENITAL STENOSIS OF THE AORTA.

BY R. O. MOON, M.D. OXON., F.R.C.P. LOND.,

PHYSICIAN, WESTERN GENERAL DISPENSARY, MARYLEBONE, AND HOSPITAL FOR DISEASES OF THE HEART, SOHO SQUARE, ETC.

A LAD, aged 17, was brought to see me at the Western General Dispensary in August, 1908, on account of facial paralysis, about which there was nothing unusual, it being an ordinary Bell's palsy. Incidentally the mother mentioned that she had been told his heart was affected; at the same time he had no cardiac symptoms of any kind, although his work, that of a messenger, involved riding a bicycle a good deal.

On examination there was a very heaving impulse in the fifth space within the nipple line; there was also a forcible impulse in the third right space, and dulness to the right of the sternum in the second and third spaces extended to 2½ inches. In the aortic area there were loud systolic and diastolic murmurs, so that for a moment I concluded it was a case of aortic stenosis and regurgitation with a very large heart. However, the patient soon disappeared from observation, as the facial paralysis, with which alone he felt concerned, had improved.

On Feb. 11th, 1911, he reappeared, having been going on very well for a couple of years, but about three months previously he had begun to do some heavier work, and found himself short of breath, with pains in the left side and feeling generally weak, though what he specially complained of was irregularity of the bowels and at times pains in the abdomen. The physical signs were much the same, but there was in addition a well-marked systolic thrill in the aortic area. In July he was admitted into the Heart Hospital.

On going more thoroughly into the history of the case, it appeared that he had always been rather a delicate boy and was constantly under the doctor with bronchitis till the age of 7, when he definitely improved. The mother said that he had often been short of breath in early childhood, but that this symptom had not caused him much inconvenience. She also said that he had always been rather weak on the legs. He was very intelligent.

Physical signs.—The cardiac impulse was forcible and heaving; the apex beat was in the fifth space, ½ inch external to the nipple line. The dulness on the left extended to ¾ inch external to the nipple line; on the right it was 2½ inches to the right of the right sternal border in the second and third right spaces and 1 inch in the fourth space. There was marked pulsation in the second and third right spaces, a loud systolic and soft diastolic murmur audible all over the præcordium, and a systolic thrill in the aortic area. The pulse was slightly collapsing and the blood pressure (Riva-Rocci) was 180. Pulsation in the femorals was scarcely perceptible. The lungs were clear. The liver was enlarged to midway between the costal margin and umbilicus; it was also tender. The urine was of specific gravity 1020; there was a faint cloud of albumin. The patient was very much undersized, and he had a very wizened look. The diagnosis was made of a congenital condition of the heart, probably some form of stenosis of the aorta.

His main trouble during the first few weeks in hospital was pain in the abdomen and bottom of the back, which, however, gradually improved with attention to the bowels; there was always a trace of albumin to be found in the urine, but about the middle of August this became much more definite in quantity, showing 1·5 grm. per litre (1½ per 1000 in Esbach's tube); the amount of urea averaged 23 grm. per litre, and the microscope showed granular and epithelial casts. At this time there also supervened some œdema of the feet, legs, and lumbar region. The optic discs were healthy.

Meanwhile the area of cardiac dulness increased considerably, extending almost from the left anterior axillary line to the outer margin of the right nipple line. A well-marked cantering sound developed audible internal to the apex and pointing to increased tension in the left ventricle, a common accompaniment of renal disease; for a time the diastolic murmur was not audible. The amount of albumin increased, being generally 2-3 grm. per litre, and on one occasion reaching as much as 8 grm. per litre. The X rays showed the heart to be enormously enlarged to within 1 inch of the left chest wall. The right shadow extended from the second space to the diaphragm and to the right nipple line.

On Nov. 12th the patient had a stroke affecting the left arm and lower part of the face; the lower extremity was unaffected. In a few days the paresis of the face was no longer noticeable, and the arm could be moved easily, but not the hand. On the 13th he complained much of pain and swelling in the right thigh; the face was very œdematous. At the same time there was a rise of temperature which continued for a week. On the 16th a pericardial rub was heard in the third left space. On the 20th the apex beat was three inches external to the nipple line. The pericardial rub was very distinct in the third and fourth spaces to the left and right of the sternum. The liver reached as far as the umbilicus; the feet and scrotum were very œdematous. The urine showed urea 30 grm. per litre; albumin, 1 grm. per litre. On the 27th the lungs, which most of the time had been quite unaffected, showed signs of œdema, and there was also hæmoptysis, pointing to a possible infarct. The patient complained very much of feeling dazed in the head. On the 28th he seemed fairly comfortable all day, but at 8.25 P.M. was taken suddenly bad, became unconscious for a few minutes, then it was found that his speech was affected and the right side paralysed. He died at 10 P.M.

As regards treatment, there was little to be done. At first the indigestion was combated by dieting and bismuth. Later on, when the œdema became an important feature of the case, he was given theobromine, gr. v., three times a day, which at first seemed to help him a good deal; but when it reappeared the second time the drug had little effect, even when given in larger doses. While remaining in bed he had little in the way of cardiac symptoms and was mainly troubled by pains in the back and abdomen.

The report of the necropsy, which was performed by my colleague, Dr. Russell Wells, is as follows: "Body thin; skull very thick; right side of chest sunken. Slight amount of fluid in the abdomen. Pleura: Left not thickened, but firm extensive adhesions of the left lung to the pleura and pericardium. Very slight adhesions at the base of the right lung to the diaphragm. Lungs: Weight, right, 27 oz.; left, 14 oz. (There was nothing abnormal in the lungs, except for large recent dark infarct at the base of the lower lobe of right lung.) The pericardium contained no fluid. There was a patch of fairly recent pericarditis on the visceral layer of the pericardium. There were no adhesions. The heart was enlarged as a whole; weight, 31 oz.; left ventricle was dilated and hypertrophied (wall 2 cm. thick). The left auricle was very small—cavity measuring 3·5 cm.; its wall was hypertrophied. The right ventricle was dilated and hypertrophied; it formed the apex of the heart. The right auricle was dilated. The mitral orifice was smaller than normal. The tricuspid orifice was larger than normal. The aorta: First part was dilated, but soon narrowed; the ductus arteriosus was present, but was not patent. Immediately beyond the opening of the ductus into the aorta there was a constriction which occluded the lumen of the aorta. Beyond this the artery widened again. The constriction was just beyond the left subclavian artery. The valves of the heart were not diseased. The abdominal aorta was very small and the common iliacs were about the size of a normal radial artery. Liver: Weight, 71 oz. It was congested and intensely nutmeg in appearance. No perihepatitis. No inflammation of the gall-bladder. Spleen: Weight, 4 oz., small and firm; no adhesions. Pancreas normal. Appendix healthy but long. Kidneys somewhat small and engorged. The capsule stripped with some difficulty. The cortex was not diminished, and there were no marked signs of lesions macroscopically. Microscopically: In places the cells of the

tubules were swollen, in others desquamation could be seen. In places there was increase in the interstitial fibrous tissue. Here and there infiltration with blood was to be seen. There was nothing particularly abnormal in Bowman's capsules. The condition showed both interstitial and subacute nephritis. Nervous system: Brain, weight 44 oz. No meningitis. There was a small recent hæmorrhage in the right hemisphere in the subcortical region, just posterior to the fissure of Rolando, about the size of a bean."

These cases are far from common. It is usual to divide this form of aortic atresia into two kinds: (*a*) A diffuse narrowing of the aorta at the isthmus (i.e., that part of the vessel which lies between the left subclavian and the insertion of the ductus arteriosus) known as "the infantile type," which seldom survives any length of time, as it is usually accompanied by other serious congenital lesions; and (*b*) the adult type, to which this case in the main conformed. In this type the constriction is not of developmental origin, but is explained as an extension of the peculiar tissue of the ductus arteriosus into the adjacent wall of the aorta, which thus contracts after birth along with the contraction of the arterial canal, and so produces the aortic constriction. Usually in these cases, as in mine, the ductus is obliterated, but it may remain patent (it was so in 13 out of 129 recorded cases). The great difference of these cases from those of the infantile type lies in the fact that an extensive collateral circulation usually develops, giving rise to marked physical signs, and that other serious anomalies are generally absent, thus suggesting a post-natal origin.

The blood-supply of the lower part of the body is maintained by the development of an extensive collateral circulation.

Main anastomoses.

Above the stenosis	The superior intercostals. The internal mammaries. The posterior scapular.
Below the stenosis	The first four aortic intercostals. The phrenics. The superficial and deep epigastrics.

In consequence of the elaborate provision for a collateral circulation the heart has sometimes been found to be of normal size, as the new channels provided by the dilated collaterals are sufficient to carry on the circulation without increasing the work of the heart, so that even in extreme degrees of constriction the heart may remain normal. Usually, however, as in this case, the heart shows marked hypertrophy and dilatation. This condition is most common in the male sex.

In some of the most well-marked cases symptoms have been absent throughout life, but more usually we have the symptoms, as in this case, of the cardiac insufficiency which so frequently supervenes. There is often a lack of development. My case only weighed 7 st. 2 lb. Cyanosis is said to be rare.

The symptoms of intermittent claudication, which *a priori* one might expect to find, are said to be always absent, even in the most extreme degree of constriction, thus indicating that the blood-supply to the lower limbs is physiologically sufficient; but in my case the patient was said to have been always weak on his legs, which would seem to suggest that the collateral circulation in the lower limbs was not sufficient.

Prognosis.—Though about half the cases which have been recorded died between the ages of 20 and 40, this lesion does not necessarily interfere with the duration of life, as seven patients died in the sixth decade and six in the seventh decade, while one lived to the age of 92. The physical signs bear no constant relation to the symptoms, but may be present when the latter are lacking; perhaps in no pathological condition are more extensive changes compatible with fewer evidences of disease during life.

A very full account of this rather rare condition may be found in an article by Bonnet in the *Revue de Médecine*, 1903; also in the chapter on Congenital Cardiac Disease by Maude Abbott in Osler and McCrae's "System of Medicine."

Green-street, W.

Professor Kraepelin, the eminent Munich alienist, has resigned his position on the medical council of the kingdom as a protest against the action of the Minister of the Interior, who has refused to sanction the expenditure of £500 in establishing a drink cure station in Upper Bavaria.

TWO CASES OF SPLENECTOMY FOR RUPTURE OF THE SPLEEN; RECOVERY.

BY W. FOULKES JONES, M.R.C.S. ENG., L.R.C.P. LOND.,
HOUSE SURGEON TO ST. GEORGE'S HOSPITAL.

THE following two cases under the care of Mr. H. S. Pendlebury at St. George's Hospital are of interest because in the one case the signs—bruising of the skin and dulness in the flank—all pointed to the right side, and the hæmorrhage suspected was thought to come probably from the liver. In the second case the violence had been slight, and until two days after the accident there were no signs of progressive internal hæmorrhage. The infection of the spleen with miliary tubercles, together with its great friability, probably accounted for the ease with which it was ruptured.

CASE 1.—The patient, a man aged 37, was brought into hospital on the night of May 20th, 1911. The history was indefinite. He was stated to have stepped from an omnibus and to have collided with a taxicab. It was not clear whether the taxicab had run over him or not. On admission the man was drunk. He was pale, but, according to his relatives, not more so than usual. He complained of pain in his abdomen, and there was a slight but definite bruise in the *right* iliac fossa. The pulse was feeble but not rapid. Next day signs of internal hæmorrhage appeared, together with a slight but increasing abdominal distension and dulness in the right flank, and it was decided to operate.

Mr. H. S. Pendlebury first made a vertical incision through the *right* rectus and found the peritoneal cavity full of blood. The liver and right kidney were examined and no wound of these organs was discovered, but the spleen was felt to be ruptured. An incision was then made towards the left from the upper end of the first incision and at right angles to it, and through this wound the spleen was delivered and removed after its vessels had been clamped and ligatured. The incisions were closed with interrupted stitches of silkworm gut. For the first few days the wounds were dressed with hot fomentations. The stitches were removed on June 4th, when the wounds had healed except for sloughing of the skin at the junction of the two incisions. On June 24th the patient went to the convalescent home wearing an abdominal belt.

CASE 2.—The patient, a schoolboy, aged 12, fell and hit his left side against the curbstone at 5 P.M. on June 29th, 1911. He was seen two hours later by Dr. Leigh Phillips; he was then absolutely pallid with a rapid pulse, but with no dulness in the flank. He was admitted into St. George's Hospital on June 30th, when there was a very slight diminution of resonance in the left flank below the costal margin, but the boy was of a good colour, and there was nothing to suggest progressive internal hæmorrhage. The following day, however, laparotomy was considered advisable owing to a marked acceleration of the pulse-rate, and an increase of the dulness in the left flank.

Mr. Pendlebury made a vertical incision through the upper part of the left rectus and found free hæmorrhage in the peritoneal cavity, proceeding from the spleen, which was completely torn across. After its pedicle had been ligatured the spleen was removed. It was enlarged in size and studded with miliary tubercles, which were subsequently submitted to microscopical examination. The peritoneal cavity was swabbed out, a quantity of normal saline introduced, and the wound closed. The patient made an uninterrupted recovery, and the stitches were removed on July 13th. He was sent to the convalescent home on July 20th.

We have followed up these two cases carefully, and up to the present date (April, 1912) have discovered no enlargement of the lymphatic glands. The man has been at work since Christmas; there is now some yielding of the scar, but that is all. The boy is back at school. They both present a healthy appearance, and state that they feel as well as they did before their accidents, and that they do not notice any undue fatigue on exertion.

The composition of the blood, as examined in October, 1911, and March, 1912, has been practically normal in the case of the man. In the case of the boy the white cells in March, 1912, amounted to 19,200 per c.mm., 59 per cent. of

which were polymorphonuclear cells, 38 per cent. lymphocytes, 1 per cent. mast cells, and 2 per cent. eosinophils. The red cells and colour index were practically normal. He has no signs or symptoms of any tubercular infection.

I am indebted to Mr. Pendlebury for permission to publish these cases.

A CASE OF HÆMOPERICARDIUM OF TRAUMATIC ORIGIN; OPERATION.

BY E. B. GUNSON, M.D. EDIN.,
HOUSE PHYSICIAN, EAST LONDON HOSPITAL FOR CHILDREN, SHADWELL, E.

THE patient, a girl, aged 2 years and 7 months, was brought to the East London Hospital for Children on Dec. 11th, 1911. The child had been seedy for several weeks, and three days before admission had fallen over a chair and had since complained of pain in the front of the chest and in the stomach. The parents discovered no evidence of injury and the child's general condition was not appreciably affected by the accident. Two days after the fall the broken half of a needle was found in the child's corset. The patient walked to the hospital, and while in the casualty room was seized with a syncopal attack and admitted at once to a medical ward under the care of Dr. H. Morley Fletcher. The patient responded to stimulation and regained consciousness.

The condition on examination was as follows. Pulse almost imperceptible at the wrist, respirations normal, and temperature 96° F. The patient was very pale, the eyes being sunken, and she looked extremely ill. Examination of the abdomen and lungs revealed nothing abnormal. There were no nervous symptoms. The apex beat could not be felt. Cardiac dulness extended one finger's breadth to the right of the sternum, to the second interspace above, and to the left as far as the nipple line. The heart's rhythm was tic-tac, the action irregular, and the sounds extremely feeble. Faint double pericardial friction was present at the lower end of the sternum, extending outwards into the fourth, fifth, and sixth spaces on the right side, with maximum intensity in the fourth space three-quarters of an inch to the right side of the lateral sternal margin, where a small scar of the size of a pin's head was present. Blood examination revealed a leucocytosis of 28,500 per c.mm.; polymorphs 90 per cent. A diagnosis of pericarditis with effusion was made.

The patient gradually relapsed into the condition in which she was seen on admission, and as stimulants were of no avail paracentesis pericardii was performed, the exploring needle being passed through the fifth intercostal space 1 inch to the left of the sternum. 20 c.c. of thick blood-stained fluid were withdrawn. The pulse at once returned at the wrist, the heart sounds became louder, and marked pericardial friction was to be heard over the whole of the præcordia, with maximum intensity in the fourth right interspace. The child immediately regained consciousness, sat up in bed, and asked for her mother. Shortly afterwards she fell asleep and remained quiet for several hours. Six hours after the operation the patient became restless, pulse feeble and irregular, and an hour later was completely unconscious, the physical signs present being identical with those before paracentesis was performed. Paracentesis was repeated, with precisely similar result, only 5 c.c. of fluid, however, being obtained. On examination the fluid was found to consist entirely of blood, which, however, showed no signs of clotting after standing for several days. Cultures were sterile.

The question of the cause of the condition was now to be considered. Having regard to the fact that a portion of a needle was removed from the clothing of the patient at a point corresponding to the skin wound on the chest, where the pericardial friction reached its maximum intensity, the origin of the effusion was considered to be traumatic. This was confirmed by X ray examination of the chest made six days later, the child having steadily improved meanwhile. The radiogram clearly showed what exactly corresponded to the undiscovered fragment of the needle embedded in the chest wall to the right of the sternum. It was decided to remove it and the operation was performed the following day by Mr. Wilfred Trotter.

The anæsthetic used was intravenous ether, 5 per cent. in normal saline, at room temperature. The cannula was inserted into one of the veins at the bend of the elbow. Anæsthesia was induced in five minutes and remained complete and even throughout the operation, the patient's condition causing no anxiety. Twenty-two ounces of solution were used.

The operation lasted 55 minutes. A rectangular skin flap was raised, beginning 1 inch external to the junction of the second costal cartilage with the rib on the left side, prolonged inwards to the midsternum, then downwards for about 3 inches, and finally outwards to a corresponding point on the fifth rib, exposing the second, third, and fourth costal cartilages; these were removed. In the exposure of the pericardium the right pleura was accidentally opened and sewn up with catgut. A small incision was made into the pericardium at the level of the third intercostal space and 300 c.c. of blood-stained fluid were allowed to escape. The incision was then enlarged, and with the finger the sharp needle-point was felt passing one-eighth of an inch into the pericardium, the bulk of the needle being firmly fixed in the chest wall at the level of the fourth intercostal space on the right side, one inch from the sternum. The needle point was embedded in firm inflammatory exudate. This was broken down to give free access to the foreign body, which was removed with considerable difficulty by means of a pair of curved forceps and delivered by way of the pericardium. The skin flap was sewn up, and a cigarette drain inserted into the pericardium.

For six days the patient's condition remained satisfactory; there was a slight pneumothorax, which quickly subsided. The discharge was now sero-purulent, and in the course of the succeeding few days became purulent, which in view of the fact that an infective condition of the pericardium was demonstrated at the operation was not surprising. The streptococcus pyogenes and a diphtheroid organism were cultivated from the pus. Broncho-pneumonia set in on the fourteenth day, and proved fatal a fortnight later. The wound up to the end was satisfactory.

Necropsy.—Post-mortem examination revealed extensive broncho-pneumonia. The heart was greatly increased in size, chiefly due to hypertrophy of the left ventricle, the wall of which measured half an inch in thickness. Endocarditis of the mitral valve was present; the other valves appeared healthy. Dense adhesions were present between the two layers of the pericardium. These were most notable low down on the anterior surface, and especially on the posterior surface of the right ventricle towards the apex. The density of the adhesions prevented the demonstration of any small traumatic lesion, while there was no evidence of an extensive wound of the pericardium or the heart wall. The left ventricle was covered with a more recent buttery exudate. Adhesions were present over the roots of the great vessels posteriorly. Posteriorly over the right ventricle the pericardium was one-fifth of an inch thick.

The hæmorrhage must have been due to wounding of the parietal pericardium by the needle; the fact that paracentesis had to be repeated would suggest that oozing was still going on when the child was admitted to hospital. It is interesting to note how comparatively comfortable the patient remained up to the time of the operation considering the size of the effusion that was demonstrated on opening the pericardium. This can be best explained by the absolute rest and quietness that were enforced.

Hæmopericardium in children would appear to be a rare condition, as records of two cases only can be found in English and American literature. One, a case of sudden death in a child aged 5, is reported by Evans.[1] Post mortem the pericardium was found to be distended with blood, the hæmorrhage resulting from rupture of an aneurysm of the left coronary artery. The other, recorded by Morse,[2] occurring in a girl aged 2½ years, is an almost parallel case with the present one. In it, however, the symptoms were slow in onset and milder in character, recovery resulting after one aspiration of 400 c.c. of fluid. The fragment of the needle remained in the body, operation being refused.

I am greatly indebted to Dr. Morley Fletcher, under whose care the case was, and to Mr. Trotter, who performed the operation, for permission to publish these notes.

[1] Evans: Birmingham Medical Review, 1889, vol. xxvi., pp. 20-23.
[2] J. L. Morse: Boston Medical and Surgical Journal, 1904, vol. cl., pp. 240-242.

A DERMATITIS CAUSED BY "DI-NITROCHLOR BENZOLE."

BY M. J. BERNSTEIN, M.B., B.SC. EDIN.,
DERMATOLOGIST TO THE VICTORIA MEMORIAL HOSPITAL, MANCHESTER.

WHILST many of the organic compounds of chlorine are known to have toxic effects of various kinds, the above-named substance, which is used in the manufacture of certain dye stuffs, produces characteristic—and I believe specific—effects on the skin, and to a lesser degree on the mucous membranes, of those who work with it. This substance consists of lemon-yellow crystals giving out an odour of bitter almonds. It does not dissolve easily in water or acids or alkalis, and is, in fact, not used in solution. If a few particles are allowed to touch the skin they produce almost immediately a burning and stinging sensation; if the fingers which have touched the crystals are allowed to touch any part of the face, especially in the neighbourhood of the eyes, the smarting sensation becomes almost intolerable. If the skin is moistened with water beforehand the smarting is more immediate and greater, and the effect is still more intense if the skin is greased beforehand with a neutral fat. This, no doubt, is due to the particles adhering more firmly and closely to the moistened skin than to the dry skin. It leaves for a little while a redness over the part. Among some, on merely smelling at it—or rather repeatedly sniffing it—it causes a mild coryza.

Amongst workmen who handle it, or even only work in the same room—as in the case of a fitter who had to do some repairs, and also of a manager who apparently had only occasionally to go into the room—a violent dermatitis is produced. It takes the form of an erythema with much œdema, but the affected skin has a distinctly *yellowish* tint—especially in the face. This is accompanied by a few scattered papules and vesicles. There are intense itching and smarting, causing loss of sleep. The forearms are first affected, then the hands, and then the face and neck; in the bad cases it also attacks the feet, and in one case there was a history of its having been on the chest. In no case does there appear to have been any constitutional disturbance; the urine was examined in the worst cases and found normal. The men attacked were nearly all new to the work; they had only been at the place for a month or less.

The following are details of cases I have seen during a period extending over a period of about two years. They were, I believe, only those who were actually disabled from work; I understood that many suffered in a slighter degree without being actually disabled.

CASE 1.—A. B., aged 28, labourer. Suffers from an erythemato-papular rash on backs of hands and wrists, and scattered papules up forearms. Started ten days ago.

CASE 2.—C. D., aged 34, labourer. Has an erythema of both forearms and a little way up into upper arms; the right hand is also swelled; face and neck also affected. Very few papules. Started one week before being seen.

CASE 3.—E. F., aged 45, labourer. Both forearms affected, the left being worse; hands in a slighter degree. Started one month ago, about five weeks after commencing present work.

CASE 4.—G. H., aged 32. The flexor surfaces of forearms only affected. Duration of complaint not noted, but had been only eight weeks at works.

CASE 5.—I. J., aged 45, labourer. Forearms and face affected, the latter being œdematous only. Duration five days; about a fortnight after beginning work.

CASE 6.—K. L., aged 35, labourer. Backs of both hands affected. Duration six days; three weeks after starting present employment.

CASE 7.—M. N., aged 33, sub-manager. Palms of hands mostly affected, the dorsa only very slightly; also a small space above each elbow slightly affected. Duration two weeks.

CASE 8.—O. P., aged 35, labourer. Parts affected: Right side of face, particularly the lower eyelid, which had many vesicles on its surface; back of right hand; extensor surfaces of wrists and forearms; extensor surfaces of both upper arms; also the anterior portions of the dorsa of the feet, the left foot being the worst. Duration only two days.

CASE 9.—Q. R., aged 50, fitter. Considerable œdema of face and hands. It has been on chest and neck. Urine sp. gr. 1010, no albumin. Started four weeks ago, four weeks after commencing work.

All the cases were very amenable to treatment—simple soothing and antipruritic remedies—and rapidly recovered. In only one case (No. 8) was there a relapse when the patient was nearly recovered, but that was caused by indulgence in drink. He was, in fact, longer in getting over the effects of the relapse than the first attack. It does not seem that the men are liable to second attacks. Some sort of immunity, indeed, appears to be set up by the first attack.

Manchester.

BILATERAL OPERATION FOR INGUINAL HERNIA:

ITS ADVANTAGE IN OPERATING FOR RADICAL CURE IN YOUNG SUBJECTS.

BY E. W. ROUGHTON, B.S. LOND., F.R.C.S. ENG.,
SURGEON TO THE ROYAL FREE HOSPITAL.

DURING recent years opinion as to the nature of hernial sacs has changed considerably. It is now generally recognised that "acquired" hernial sacs are much more uncommon than they were formerly supposed to be, and that many people have hernial sacs into which no "contents" have ever passed. Clearly these empty sacs cannot be formed by peritoneum, which has been pushed down from the abdominal cavity; they must be the remains of some part of the funicular process of peritoneum which has failed to become obliterated in the course of development. I believe that all oblique inguinal hernial sacs in children and young adults are formed in this way and that they are really never "acquired."

Such being the case, there is a possibility, or even a probability, that a person with a hernia on one side may also have an empty or "latent" sac on the other side. It is by no means uncommon for a person who has been operated upon for radical cure of hernia to return a year or more later to be operated upon for a similar condition on the opposite side of the body. Quite recently a young man was admitted under my care with a strangulated hernia on the right side; only a few months previously he had been successfully operated on for the radical cure of a left inguinal hernia at another hospital. At that time there was no evidence of any hernia on the right side, but it is quite certain that f both sides had been operated on he would have been spared the inconvenience, suffering, and risk to life due to the attack of strangulation which brought him under my care.

For the last 18 months, when operating upon inguinal hernias in children and young adults, I have made a rule of looking for a sac on the other side. On referring to my notes I find that I have looked for a latent sac in 18 cases. In 10 cases I found a sac varying in length from half an inch to 2 or 3 inches. In the other 8 cases no sac could be found. These figures are, of course, much too small to determine the frequency of latent sacs, but they suffice to show that the condition is quite common.

In searching for a latent sac it is necessary to proceed on a definite plan. It is one thing to find a sac which is known to be present, but it is quite another thing to search the canal and to be able to say with certainty that no sac is present. In some cases the latent sac is 2 or 3 inches long, and is then found as easily as one finds the sac in an ordinary hernia; but in several cases I have found a sac not more than half an inch long, and about large enough to admit the tip of the little finger.

The method which I adopt is as follows. The usual incision is made, and the external oblique and external ring are thoroughly cleaned up and defined. The external oblique aponeurosis is split up as far as the position of the internal ring, care being taken only to divide the transverse or intercolumnar fibres; the aponeurosis is cleanly separated from the subjacent cremasteric fascia. The latter is then seized opposite the external ring with two Spencer Wells forceps, drawn down towards the pubic spine and spread out. It is then neatly divided in its whole length. If an ordinary sac is present it is at once seen, but sometimes one finds a collection of yellow granular fat, and on tracing this up to the internal ring one discovers a small but very definite sac. If no sac is found after looking in this way one may feel sure that no sac is present. The external oblique is then repaired with four or five interrupted sutures and the wound closed. This performance adds practically nothing to the risk or severity of the ordinary radical cure, and insures the patient against the possibility of a second operation.

Queen Anne-street, W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE OF A CASE OF TRUE CAULIFLOWER EXCRESCENCE.

BY NELLY EVANS, L.R.C.P. & S. EDIN., L.F.P.S. GLASG.,
SURGEON TO THE VICTORIA ZENANA HOSPITAL, HYDERABAD, DECCAN, INDIA.

THE fact that tumours of the nature of the one described in the following case occur but very rarely will perhaps be deemed an adequate reason for recording the case in THE LANCET.

The patient was a healthy-looking young Mahomedan woman of fair complexion and of about 24 years of age. She was admitted to the Victoria Zenana Hospital on May 19th, 1910, complaining of a watery and very offensive vaginal discharge. She stated that she was then in the beginning of the fifth month of her fourth pregnancy; all former pregnancies and labours had been normal, and her three children were living. She had first noticed the discharge a month previously to admission, and it had gradually become more profuse and very offensive. No pain was felt, and the fœtal movements were normal. The uterus corresponded in size to the period of pregnancy, and all the usual signs and symptoms were present.

On vaginal examination a growth was felt springing from the base of the cervix, villous and friable, little pieces breaking away on the finger. When seen by means of Auvard's speculum, the cervix being drawn down by a vulsellum, the tumour presented the appearance of a cauliflower, was fleshy pink in colour, and consisted of three separate portions, each springing by a pedicle from the mucous membrane, where it was reflected from the vagina over the cervix. The growth encircled the right half of the cervix, the centre portion having the broadest pedicle.

The patient was anæsthetised with chloroform, and after ligaturing the pedicle in the hope of thereby preserving the specimen the tumour was removed with scissors. The deeper tissues were not involved, and the mucous membrane was stitched to stop oozing, which was free. The growth was at once placed in rectified spirit and has been sent to the Museum of the Royal College of Surgeons of England.

The patient was discharged from hospital at her own request on June 2nd. There were no symptoms after the operation; the discharge quite ceased on removal of the tumour. Although asked to return to the hospital for her confinement the patient did not do so and was not seen again.

The growth exactly tallied with the description given of true cauliflower excrescence in Herman's "Diseases of Women," except that it did not grow from the margin of the os, nor was it quite so firm in consistency as a cauliflower. The latter characteristic might be due to the general softening and increased vascularity of pregnancy.

Hyderabad.

NOTES OF TWO CASES OF ACUTE PANCREATITIS.

BY H. W. WEBBER, M.S. LOND.,
SURGEON TO THE SOUTH DEVON AND EAST CORNWALL HOSPITAL.

CASE 1.—A woman, 72 years of age, was sent into the hospital on Oct. 2nd, 1911, by Mr. Elliot Square with the following history. The patient had been quite well up to the previous day, with the exception of an attack of vomiting three weeks before, caused, she thought, by eating some apples. On Oct. 1st she was seized with acute abdominal pain and vomiting, which had continued up to the time of admission. The bowels acted on the 1st. On admission she was found to have a moderately distended abdomen, rigid and tender on palpation, with considerable pain, located in the right hypochondrium. Neither rectal nor vaginal examination gave any information.

The case being considered one of intestinal obstruction, an incision was made on the left side of the abdomen with a view to colostomy, but the large bowel was found in a collapsed condition; the small intestine was not distended. An incision was then made on the right side, and was afterwards extended upward so as to reach from a little above the level of the umbilicus to the right iliac fossa. The omentum presented and was found to be dotted with numerous sharply defined white areas (fat necrosis). Some blood-stained serous fluid welled out in considerable quantity from the upper part of the abdomen, and a soft nodular mass could be felt in the region of the head of the pancreas. A large drainage-tube was passed down to this mass, and the wounds were sutured in layers.

For some considerable time (nearly three weeks) after the operation the abdomen remained distended, though the bowels acted every other day to an enema. On Oct. 23rd it was noticed that the lower limbs were œdematous, and this condition lasted for over a month, though the case progressed well in every other respect. The patient was discharged quite well on Jan. 26th, 1912.

CASE 2.—A man, aged 51 years, was seen by Mr. C. H. Stevens, of Plympton, about midday on April 3rd, 1912. At 10.30 A.M. of the same day the patient was seized with sudden acute abdominal pain which caused faintness and collapse, and was thought to be due to the man drinking cider while heated. When I saw him at 3 P.M. he was lying in bed with knees flexed; he had a typical "abdominal" aspect, a pulse of 82 per minute, and a temperature of 101° F. The abdomen was rigid and painful to palpation; no liver dulness could be defined. The case was considered one of perforated gastric or duodenal ulcer, and immediate operation decided on.

On opening the peritoneum blood-stained serum escaped. The stomach and duodenum were examined with negative result. On further examination a nodular mass of the size of a small orange was found in the body of the pancreas, bleeding freely on manipulation. An opening was therefore made in the gastro-hepatic omentum and a large drainage-tube was passed down to the mass. The abdominal incision was then closed.

The subsequent history of the case was uneventful. For the first three days blood clot and serum escaped from the tube. After this the tube was daily shortened, and the wound healed by three weeks after the operation.

Plymouth.

Medical Societies.

THE ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Exhibition of Cases.

A MEETING of this section was held on May 31st, Sir WILLIAM OSLER, Bart., F.R.S., the President, being in the chair.

Mr. RUPERT FARRANT showed a case of (?) Acromegaly. The patient was a man aged 21. Present condition: His skin was pigmented in the axillæ and there was marked muscular wasting. The knee-jerks were increased and the right plantar reflex was extensor. The forehead receded, the lips and tongue were enlarged, the speech was somewhat blurred. The lower jaw and the malar bones were prominent, and to a lesser extent the mastoid processes and the external occipital protuberance. The right index finger was thicker than the left. The femora were bowed outwards, the necks thickened and bent and the heads enlarged, and the articular surfaces extended down on to the neck. These changes in the femora caused much limitation of movement, and the limbs lay in a position of external rotation—the left 75°, the right 15°. An X ray print of the skull showed some widening of the pituitary fossa. There were no changes in the fundi or in the fields of vision. There was no polyuria. Mr. Farrant suggested that the case was one of early acromegaly combined with changes in the upper ends of the femora.

Dr. FREDERICK LANGMEAD showed a case of (?) Co-arctation of the Aorta with Thoracic Aneurysm not connected with the Aorta. The patient was a married woman, aged 55, and the mother of 13 children, 12 of whom were alive and well. There had been no miscarriages. The first symptoms of

disease occurred in September, 1909. While at work at home she suddenly lost the use of her right hand, and in a few minutes the entire right side was paralysed and she could not speak. She did not lose consciousness, however, and during the progress of the paralysis was able to struggle down four flights of stairs. For 13 days she was semi-conscious. The power in the right side and speech gradually recovered, and there remained only slight rigidity and an extensor plantar response on that side. On several occasions she had vomited a drachm or so of blood after meals. Over the back of the thorax, especially on the left side, were several tortuous and pulsating vessels, which communicated with others in the left axilla; they were apparently arteries, and probably represented a secondary circulation. To the left of the second and third dorsal vertebræ was a slightly protruding area, about the size of half-a-crown. It pulsated slightly, and over it a thrill could be felt and a loud systolic bruit heard. A somewhat more extensive area of dulness was obtainable, reaching from the seventh cervical vertebra above to the third dorsal below, and extending to just beyond the spine to the right. The bruit could be heard most loudly opposite the second dorsal vertebra on the left side, and was traceable across the spine and downwards for three or four vertebræ. If the tortuous superficial arteries were compressed the pitch of the bruit heard over the pulsating tumour altered. There was no direct evidence of obstruction to, or delay of, the flow of blood in the thoracic aorta; the abdominal aorta and femoral arteries pulsated normally. The heart was not enlarged, but a definite systolic murmur was heard over the aortic area, and was conducted into the vessels of the neck. There was a movable kidney. Wassermann's reaction was negative. Radiograms showed a very defined, circumscribed, rounded shadow, situated between the third and fourth ribs, posteriorly near their junction with the vertebral column. It was obviously a structure with dense walls, and contained some opaque material. No history of syphilis was obtainable. The case was shown to elicit opinions as to diagnosis. The view suggested was that there was an aneurysm of an intercostal artery, which was dense-walled, and contained a considerable amount of clot. It had been stated that such a secondary circulation could only occur in co-arctation of the aorta, which possibly co-existed.

Mr. W. G. SPENCER showed a case illustrating Relief following Bilateral Nephrotomy and Drainage in a case of Nephritis complicated by Suppression of Urine and Uræmic Convulsions.

Mr. PAUL B. ROTH showed two cases of Osteo-periostitis of the Tibia (Congenital Syphilitic). The first was a boy aged 8 years and 10 months. On examination there was observed a spindle-shaped swelling, involving the upper third of the leg. The swelling consisted of an enlargement of the shaft of the tibia. A radiogram showed that the shaft of the tibia for its upper third was increased in size by a localised osteo-periostitis. The Wassermann reaction was completely positive. The second was that of a girl aged 7. Two weeks before Christmas the child had had a severe blow on the left shin. On examination there was observed a spindle-shaped swelling, involving the middle two-fourths of the leg. The calf muscles were wasted. The swelling appeared to consist entirely of an enlargement of the shaft of the tibia, and a radiogram showed that the shaft of the tibia for its middle three-fifths was markedly thickened by a deposition of new periosteal bone. The Wassermann reaction was completely positive.

Dr. JAMES GALLOWAY showed a case of Tonic Spasm of the Muscles, chiefly of the Extremities (? Myotonia). The patient, a girl, aged 14, since Christmas had had difficulty in moving the muscles of the left arm and hand, a condition that had continued and increased up to the present time. There was similar difficulty in moving the muscles of the left leg and foot. The right arm, hand, and leg appeared to move practically normally. The muscles of the left arm and hand were found to pass into a condition of spasmodic contraction on very slight exertion or stimulation; the contractions resulting relaxed very slowly. On clasping the hand on any object the grasp of the hand continued for many seconds, and it was only after strong voluntary effort or after waiting for some time that the grasp was relaxed. Movements brought about a similar long-lasting spasm of the muscles of the left shoulder. Similar long-enduring spasm affected the muscles of the left leg and foot, causing some impairment of ease in walking. All movements became easier and more rapidly executed when repeated. The electrical reactions were normal, there was no alteration in sensations, no definite evidence of increase of reflexes, nor were there involuntary muscular movements. The child was well in all other respects.

Dr. GALLOWAY also showed a case of Sclerema Cutis (Adultorum). The patient, a man, aged 54, stated that his malady followed rapidly after being exposed to a foul atmosphere. The firm swollen state of the skin was noticeable from the face down to about the level of the loins, and was universal within this area, though worse in some parts than in others. Some hardening of the skin had been noticed about the lower part of the thighs and knees, but had passed off. On the trunk a certain degree of erythema could be noted where the hardening of the skin was greatest or most recent. On the inner aspect of the arms the hardening of the skin was seen to have a lobulated texture. There was no appearance of sclerodermia nor of morphœa at any part of the affected area. The distribution of the affection was practically continuous within the limits of the affected region. A careful physical examination had not revealed evidence of visceral disease and had not suggested the cause of this unusual affection.

Dr. G. A. SUTHERLAND showed a case of Hæmorrhagic Disease in a Child (? Scorbutic). The patient was aged 7. In August of last year she had had an illness characterised by pain and swelling in the left hip and the left elbow, with pyrexia. This illness lasted for some weeks, and when the swelling at the hip subsided it was found that the head of the left femur was dislocated. Skiagrams showed marked changes at the upper ends of both femora and both humeri, in varying extent, and consisting of rarefaction of the bone below the epiphysis, subperiosteal effusion, and apparently fresh formation of bone beneath the periosteum. Attention was first directed to the humerus by the occurrence of pain and swelling about the right shoulder. At times pain, tenderness, and swelling occurred around the left hip. There were recurrent attacks of purpura affecting the legs, feet, and arms. Presystolic and systolic murmurs were heard at the cardiac apex, and some subcutaneous nodules appeared over the left elbow. Recently melæna had been present on two occasions. Hæmaturia occurred to a marked extent on May 23rd, and at other times blood cells had been present in the urine. No blood changes were detected. Wassermann reaction was negative; von Pirquet's test was negative. No sponginess of the gums or stomatitis was present. The urine was sterile.

Dr. ROBERT HUTCHISON showed a case of Fibro-caseous Tuberculosis of Glands in the Neck; Caries of the Dorsal Spine. The patient, a man, aged 46, had never been aware of anything wrong with his back. Masses of enlarged glands were present in the neck. (Section showed fibro-caseous tuberculosis.) No enlarged glands elsewhere. Viscera, normal. A radiogram showed caries of two dorsal vertebræ.

Mr. C. H. FAGGE showed a cast of Ununited Fracture of the Ulna treated by Bridging the Gap with a Slice sawn from the Tibia. The patient, a boy, aged 11, was admitted into Guy's Hospital on Sept. 16th, 1910. About two months before admission he had fallen, breaking both bones of the right forearm. There was marked deformity with large bony bosses at the middle of both bones and complete loss of pronation and supination. Examination under the X ray screen showed that this was due to cross union, with much overlapping of the fragments of both bones. On Sept. 30th the site of the fractures was exposed, a wedge including callus was sawn from the radius, and the ends joined by the application of a Lane's four-hole plate; the ulna was divided and plated in the same way. Because of non-union of the ulna he was readmitted in January, 1911; X ray showed firm union in the radius, but the gap in the ulna appeared wider and rarefaction was taking place around the screws in this bone; the plate was removed from the ulna and the ends freshened. In April, 1911, he was again operated on and the freshened ends of the ulna united with two plates after bringing them into apposition by pulling the hand inwards. Because of pain, weakness, and deformity he was again admitted in March, 1912; the deformity was most marked on full pronation and in all rotatory movements crepitus could be felt. On March 4th Mr. Fagge cut down on the radius and removed the plate; the screws were quite firm; the ulna was

then exposed and the plates removed; most of the screws lay in a granulating cavity in the bone, and there was a false joint between the two ends. Callus and granulation tissue were scraped and cut away and the posterior surfaces of both fragments were flattened with a gouge; on to this surface a slice of compact bone, 4 inches long and ¾ inch wide, sawn from the inner surface of the tibia, was firmly secured by six ½ inch screws. Two months after operation union was quite firm. He had already regained a fair amount of power and had no pain; pronation and supination are not complete, and flexion at the elbow was diminished. The chief interest in the case was the question of the fate of bone-grafts.

Mr. DUNCAN C. L. FITZWILLIAMS showed the following cases:—1. A case of Multiple Arthritis of Doubtful Origin. The patient was a girl aged 15. About 18 months ago the tarsal joints became painful and swollen. About four months later the wrists became affected. The condition had steadily become worse, and the movements of the affected joints had become very limited. She had pains at night both in the foot and in the wrists. Both wrists were flexed, the left one having no movement at all, while the right one had very slight movement. The synovial membrane of the joints was thickened and the interphalangeal joints of the hands were distended with fluid. The heart was normal, and there were no enlarged glands. No history or evidence of syphilis was obtainable. X rays showed very little bony change in the wrists. The condition was thought to be due to a chronic infection, not tuberculous. —2. A case showing the result of Bilateral Division of the Ramus of the Jaw for Ankylosis of both Joints 19 months after operation. The mouth appeared to be freely moveable and had not shown any tendency to become stiff since the operation. She was able to chew.—3. A case of Myeloid Sarcoma of the Jaw in a girl aged 10.

Dr. H. BATTY SHAW and Dr. P. J. EDMUNDS showed cases of Muscular Dystrophy in Four Patients in Three Generations. They were exhibited as exemplifications of the fact that cases of muscular dystrophy in whom there was no hypertrophy survived to old age. They also served to show the existence of types of muscular dystrophy, in which the morbid change takes place in the face, trunk, and limb muscles, combining as it were the features of distribution met with in pseudo-hypertrophic muscular dystrophy, Erb's "shoulder" type, and the "facio-scapular-humeral type" of Landouzy-Dejerine. So far as records were obtainable, two other members of the family probably suffered from similar disabilities. The malady appeared to occur in both males and females, beginning about puberty and being transmissible by either parent.

Dr. F. PARKES WEBER showed a case of Aneurysm of the First Portion of the Aorta; Diastolic Shock and Diastolic Thrill over the Heart. The patient was a woman, aged 28. Over the aortic base there were both loud systolic and diastolic murmurs. Over the mid-cardiac region there was a loud diastolic murmur, accompanied by a diastolic thrill. With the flat of the hand placed over the heart the diastolic thrill could be felt as if travelling from the aortic base towards the cardiac apex. About the nipple line, in the fifth left intercostal space, a diastolic shock could be felt, which might possibly at first be mistaken for the apex-beat. Wassermann's reaction was positive.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

Classification of the Various Forms of Dementia.

THE quarterly meeting of this association was held at 11, Chandos-street, London, on May 21st, under the presidency of Dr. WILLIAM R. DAWSON.

The PRESIDENT referred sympathetically to the decease of Sir Richard Brayn, who had been a member of the association since 1881. He also made sympathetic reference to the death of Mr. H. M. Cullinan, who for some years had been deputy superintendent of Richmond Asylum, Dublin.

In connexion with the Bill which had recently been read in the House of Commons for dealing with the feeble-minded the meeting unanimously passed the following resolution, after discussion:—

That the Medico-Psychological Association is strongly of opinion that the authority which will have to administer the new Feeble-minded Persons Control Act should be constituted at once in anticipation of any amalgamation such as is contemplated by Section 62; and that secondly, such body in the first instance should consist of the Commissioners in Lunacy, with necessary additions, this principle being in strict conformity with the recommendation of the Royal Commission on the Feeble-minded, and already being provided for in the case of Scotland in Section 67, 1, of the Bill.

Dr. ROBERT JONES read a paper on Classification of the Various Forms of Dementia. His object was to elicit some general expression of opinion among members on what was meant by dementia; also as to whether there was such a mental state as one of partial responsibility. Many people concluded that there was no such person as a criminal lunatic: if a man were a criminal he could not be a lunatic, and if he were a lunatic he was excused his crime. His own belief was that there was such a thing as partial insanity. If a person knew he was suffering from delusions they no longer constituted a hallucination, for his cognition and will might be known to be perfect. He believed there was only one form of dementia—that which was described in the scheme as primary dementia. One of the characteristics of primary dementia was unemotionalism, although will power and conductivity might be present; it had been termed "dementia sejunctiva." The question of partial responsibility was an important one from the medico-legal aspect.

Sir THOMAS S. CLOUSTON sent a contribution, which was read by the secretary, Dr. M. A. Collins. He considered that the term "dementia" should be used to indicate incurable non-congenital conditions of mind and its enfeeblement. Any other use of it led to confusion and misunderstanding. New names should be formed and used for acute dementia and for dementia præcox. The dominating form was the secondary or "sequential," and it covered five-sixths of the incurably insane; it was the type of all the hereditary forms of mental disease. He regarded it as the great reversionary condition into which the brain cortex devoted to mind fell, and he considered that all the preliminary symptoms in adolescent insanity and dementia præcox were mere preludes and parts of secondary dementia. It affected all the higher mental faculties. He said he could not conceive any classification of mental diseases in which it did not form an essential part, and he could not imagine any other form to take its place. The other forms of dementia were the toxic, the senile, the paralytic, and the general paralytic, but being one progressive phase of the progressive cortical destruction in general paralysis he would like to see its use discontinued in connexion with that disease.

Dr. C. A. MERCIER wrote that he had always understood dementia to mean any degree of deterioration of mind, whether temporary or permanent, and whether associated or not with active manifestation, such as delusions or disorderly conduct. He had considered it to mean that the demented person was unminded or deprived in some degree of some portion of his mind, especially of his judgment and intelligence. The Scottish members of the association meant by dementia a state of things in which a large portion or degree of mind was irrecoverably lost, and they struck out of his concept of dementia all those in whom the defect of mind was slight, those in whom it was accompanied by active manifestations, and persons who might or did recover. In other words, the Scotch seemed to mean the condition of the "chronic dement" of asylums. Others would admit occasional active manifestations into their concept of dementia, but would exclude and call "mania" those cases in which misdirected activity in conduct formed a large element of positive mental symptoms. He held very strongly that in every case of insanity there was some loss of judgment, of intelligence, or of normal rectitude which justified the title of dementia in the sense of weakening or defect of mind. The term "partial" as applied to dementia might refer either to the degree in which the whole of the faculties of the mind were impaired or to the several faculties as being impaired singly, the others remaining intact. In the first sense, the term "completely demented" was not infrequently used. But consideration would show that if a person were completely demented—i.e., if the whole of his mind was lost—he must be totally unconscious. In the second sense, the term "partial dementia" raised the questions whether (1) any one or more faculties of mind might be impaired while the rest remained intact; and (2) whether, if this did not occur, one or more faculties might be impaired to a graver degree than others. The occurrence of aphasia settled the first of these questions.

Responsibility—i.e., liability to punishment—was determined by the same rules in clinical dementia as in other cases of insanity. Dr. Mercier emphasised the existence, in every case of insanity, of the negative as well as the positive factor. What was important was not the delusion, but the loss of judgment that would prevent the delusion from being entertained. What was important was not the outrageous conduct of the maniac but the loss of inhibition of conduct that allowed the conduct to occur. Those losses were what he meant by the unminding, the deprivation of mind, the dementing in a literal sense, to which he attached the term dementia.

Mr. H. F. HAYES NEWINGTON said the two papers which had been contributed focussed very well the difficulty which had arisen of late years between the two forms of opinion on the matter, and especially as to what was meant by the recoverability or curability of dementia. In this respect he strongly agreed with the view expressed by Dr. Mercier. Some cases of dementia præcox got well, and Sir Thomas Clouston said they could not be dementia præcox because they did get well. The more one tried to specialise the more one got away from the fact that dementia præcox was not a disease, but a diseased condition. One might just as well try to classify anæmia or fever. The time must come when psychiatrists must make up their minds whether dementia was curable or not. He did not think we should try to patch our English classification with German cloth.

Dr. D. YELLOWLEES agreed emphatically with what Dr. Jones had said about primary dementia. He felt quite clear that primary dementia was a condition by itself—that it began in mental enfeeblement, not only in one of the mental areas, but in all of them more or less. No doubt it would be more pronounced in some than in others. Kraepelin called a number of cases primary dementia which did not come under the interpretation which he, Dr. Yellowlees, had always put upon these words. There might be intermissions, but the general trend was downwards. He felt himself in accord with Dr. Jones on the question of partial responsibility also. In Scotland cases had often occurred in which the establishment of the fact of a prisoner having partial mental disorder led the judge to modify his sentence.

Dr. G. M. ROBERTSON said he thought Dr. Jones's question as to whether dementia might be partial, and whether it might be complete, would be answered by most in the affirmative. The position was very well described in a simile by Sir George Savage—namely, that dementia was various in the same ways as the ruins of a house might be. The house might be destroyed by earthquake, or by fire, or it might simply fall into decay from age and neglect. By substituting the mind for the house the simile was apt. Some noted French alienists agreed with those in Scotland, that dementia was not a disease at all, for a disease progressed, whereas dementia need not necessarily do so. It was rather the result of a scarring, a terminus.

Dr. T. SEYMOUR TUKE instanced some cases of apparent recovery from what was regarded as primary dementia. With regard to classification, he advocated British alienists taking a line of their own.

Dr. J. CARSWELL said there were certain cases which presented early difficulties in their diagnosis, and occasionally caused serious questions of responsibility to arise. He then discussed the legal aspect of responsibility in such cases, pointing out that where the jury had evidence of reasonable doubt as to the state of the prisoner's mind, though there might not be proof that he was insane, it was in their power to reduce the charge from the more serious one to a lesser one.

The discussion of two papers was held over until the annual meeting in Gloucester.

EDINBURGH OBSTETRICAL SOCIETY.

Joint Discussion on the Maternity Benefits Clauses of the National Insurance Act.

A CONJOINT meeting with the Glasgow Obstetrical and Gynæcological Society was held in the Hall of the Royal College of Physicians, Edinburgh, on May 15th. The meeting had been arranged to consider the probable effects of the "maternity benefits" clauses of the National Insurance Act upon obstetric teaching and practice in Scotland. Dr. J. HAIG FERGUSON occupied the chair.

Dr. FERGUSON said that some provisions of the National Insurance Act threatened seriously the teaching and practice of obstetrics, and thus the well-being of succeeding generations was jeopardised. Under the Act every expectant mother, married or unmarried, who came under the sphere of the Act received 30*s.* as a maternity benefit. The mother had a right to decide whether she would be attended by a duly qualified medical practitioner or by a duly certified midwife and was to have a free choice as to the doctor or midwife. If she went to any hospital supported by voluntary subscriptions or charity she might have the benefit of the maternity allowance towards defraying the cost of her maintenance in the hospital, home, or infirmary. The women who would receive this benefit had an upper income limit of £160. The lower limit was less clear, and the impression had hitherto been that there would be a large number of women in the very lowest classes of society from whom ample teaching material would still be available for hospitals and dispensaries. But a letter received from the Scottish Insurance Commissioners in reply to some questions he asked indicated that the number thus available would be very small indeed, and would probably be found chiefly in the vagrant class and in a limited number of illegitimate cases. The woman had only two options in the choice of her attendance, and at present the certified midwife did not exist in Scotland; when she did exist, she might probably be preferred to a qualified medical practitioner as her fee would be smaller. It would also be clear that dispensary practice in its midwifery department would cease to exist. If the woman went to a hospital, this hospital "*may* have the benefit of the maternity allowance to help to defray the cost of her maintenance therein." But it was evident that *if* the hospital was granted the 30*s.* for its care of the woman, she would lose more money than if she remained at home and chose her own attendant, assuming the doctor's fee to be a guinea and the midwife's less. Consequently hospitals would probably only be resorted to in critical or abnormal cases, or where non-payment of contributions had resulted in the loss of maternity benefit. A model rule issued by the English Insurance Commissioners stated that "a member of an approved society shall not be entitled to maternity benefit in respect of his wife, if she is an inmate of any of the institutions mentioned in the rule relating to hospitals." Local authorities had the power to order the removal of patients to hospital, but only if the sanitary conditions of their dwellings made it imperatively necessary. Midwives also could, under the provisions of the Midwives Act, call in a doctor in a difficulty, the fee being recoverable, subject to the Insurance Commissioners, as part of the maternity benefit. Without dispensary practice and with such restricted hospital facilities the effective practical teaching of obstetrics to students, nurses, and midwives would be impossible. This was a grave question for all medical schools, because if efficient teaching in obstetrics could not be given all departments would suffer.

Sir J. HALLIDAY CROOM said that the subject could be looked at from three points of view—the patient's, the general practitioner's, and the teacher's—but these three could not be separated from one another, but must be discussed as a whole. It was not necessary to discuss the importance of the clinical teaching of midwifery; everyone recognised it. In Edinburgh the clinical material was obtained from the maternity hospital and the dispensaries. The maternity had last year 590 cases inside, composed of about equal numbers of married and unmarried women. In the extern department 1400 cases were attended in Edinburgh and Leith, nearly all being married women. There were seven dispensaries in Edinburgh, including the hospice, and these attended 1100 patients in the year. The General Medical Council demanded that every student should attend 20 cases of midwifery and have them under his own special control; the Midwives Act insisted that every nurse who wanted a qualification must attend 20 cases. According to the number of students and nurses, only about 11 cases could be supplied to each, and therefore the injunctions of the General Medical Council could not be fulfilled. The consequence was that many students went elsewhere for their practical training. With this difficulty now, what would the condition be when this Act came into force six months hence? It would stop all dispensary work, because what sensible woman would ever have an untrained medical student when she could have a qualified practitioner to

attend her? As regards the hospitals, no woman would enter one. In Scotland there had been a prejudice against maternity hospitals, although it was less now. Then there might be no maternity hospital, as no sane man would be taxed and subscribe to a hospital also. This Act, on the face of it, was a good one from a eugenic point of view; it put a premium on child-bearing and encouraged the propagation of the species. But did it? In the next generation those women who were getting this benefit would be treated by incompetent practitioners, and the fœtal mortality would therefore rise.

Dr. J. M. MUNRO KERR thought it possible that the general practitioner might be harmed, but he believed that a large number of women might go to hospital if they could get their confinement there for a small sum.

Dr. FERGUSON remarked that no payment would be made to any dependents of the patient if she went to hospital.

Dr. MUNRO KERR: Yes, but it is quite possible to deal with the Commissioners.

Dr. R. C. BUIST remarked that the questions of women outside and inside the hospital must be treated differently. If the woman was outside, her maternity benefit was not suspended, and it could be used. In Dundee every patient, whether attended by a student or nurse, was seen at some stage by the resident, and it was possible that in that way they would be able to satisfy the technical requirements that the attendance was given by a registered practitioner. Those women going into the hospital had their maternity benefit suspended. If the woman was also an insured person she not only got maternity but also sickness benefit; in hospital both were suspended. The money set aside for her went into the funds of the approved society of which she was a member. It was possible that some scheme might be developed by which arrangements could be made between the hospitals and the societies, so as to secure an equivalent use of this suspended benefit. There was another very serious matter. The hospitals had so far rendered their services to these women because of their financial inability to obtain skilled assistance. Under the Act they were provided with a grant for the purpose. It was a matter for very serious consideration how far the hospitals were justified in competing with the general practitioner.

Dr. F. W. N. HAULTAIN said that the class of patient who went to the maternity could not afford to give more than 15*s.* or £1 at the outside to the medical man. There could be few medical men in Edinburgh who would attend these cases for £1. So that there must be a large number thrown upon the hospital whom the medical men would not take. Some sort of scheme must therefore be made with the medical men as to how much the maternity was to ask so as not to undersell the medical men. For outside work the residents at the hospital might be increased and one would go to each case, the hospital receiving some payment—say, half the money. The resident could take a student and two nurses with him and give a demonstration on each case.

Dr. NORMAN WALKER remarked that the maternity benefit under the Act was defined as benefit for the husband but not for the wife, but it was possible for the Commissioners to alter the Act by regulation. Speaking as a member of the General Medical Council, he considered that midwifery should be taught in the same way as medicine and surgery; he supported the intern method. The student should not be sent out to pick up his knowledge in dispensary practice. Then how could one expect that women who were getting the sum of 30*s.* would sacrifice it for the privilege of being clinical material? The Act said she must be attended by a medical man or qualified midwife, but though there were no qualified midwives in Scotland the Act (Section 80 (17)) said that in Scotland it meant any midwife possessing such qualifications as might be prescribed; the Commissioners might prescribe the midwifery trained in Edinburgh and Glasgow maternity hospitals as such. The point was that these people only received 30*s.* if they were attended by a qualified medical man or midwife. He regretted the regulation of the General Medical Council as to the qualification of the student, which was in the last stages of discussion when he entered the Council. It was stupid to insist that each student must have 20 cases. Why should not a case be equally useful to two or three students if there was some one to demonstrate it?

Dr. J. W. BALLANTYNE said in Edinburgh the student must conduct 20 cases of labour under such conditions as the Senatus might from time to time determine. One way out of the difficulty would be to ask the Commissioners to recognise the medical student as a medical practitioner in these special circumstances, and to recognise the midwife in training as a certified midwife for the time being.

Dr. R. ROBERTSON said that the general practitioner might lose considerably as the midwife was recognised under the Act and there was now before the House a Midwives Bill to apply to Scotland. He believed that a fair number of medical men would attend cases at a guinea. As to pupilage, the Scotch woman would resent a student being brought in to attend her, especially when paying her way. As regards the hospital question he thought there would be no difficulty. There would be a large amount of accrued benefit which would go into a special fund; the Commissioners would have the administration of that fund, and it would be quite easy to make arrangements with the various maternity hospitals. Hospitals would still be required for albuminuric and severe cases.

Dr. J. M. BOWIE considered that the poorer class, the casual labourer and such like, would not long be in benefit, and so would require to take advantage of the hospital, as they would not receive the 30*s.*

Dr. G. KEPPIE PATERSON was inclined to think that the 30*s.* maternity benefit would increase the practice of the general practitioner. There was no doubt that women desired, if possible, to have a well-trained practitioner for their confinement, and with 30*s.* would rather go to a medical man than to the maternity hospital or the dispensary. From the dispensary point of view, there would probably be a fairly large number of cases for teaching purposes from those out of benefit, such as post-office contributors, casuals, &c.

Dr. M. DEWAR mentioned that a married woman who had kept up her weekly subscription would be entitled to the 30*s.* benefit in virtue of herself as well as the 30*s.* paid to the husband. Over and above that there was the sick benefit; the woman who was going to be confined might be suffering from some other disease not directly connected with the labour, and she would be entitled to sick benefit as well, making a large amount of money at each confinement. A great number of insured persons would get into arrears, but before the maternity benefit was suspended they must be very considerably in arrears. The insured person must be 26 weeks in arrears in one year, or an average of 26 weeks for the three previous years. As regards pupilage, he considered that in Edinburgh the woman would resent very strongly any student being brought in by her medical attendant. There were many medical men in Edinburgh attending confinements for £1 1*s.*, and a few even for less.

Dr. FERGUSON pointed out that in the case of an unmarried mother who was insured she would be entitled to 30*s.* maternity benefit but not to any sick benefit. A married insured woman would get two maternity benefits—i.e., £3.

Dr. A. W. RUSSELL (Glasgow) believed the maternity hospitals would not suffer and that teaching would not suffer. On those parts of the continent where there was State insurance the hospitals were often able to get some of the money given to the insured persons who went to the hospital. Something of that sort would be developed.

Professor J. A. C. KYNOCH (Dundee), Sir T. R. FRASER, Dr. W. FORDYCE, and Dr. J. MCLAREN also joined in the discussion.

It was proposed to appoint a committee from the meeting to confer with the Insurance Commissioners, but a motion was carried that this committee should meet and consult with the hospital subcommittee of the Scottish Medical Insurance Council regarding the maternity benefits of the Insurance Act. It was agreed that six members should be elected, the choice of these being left to the Council of the Obstetrical Society.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Presentation of Specimens.—Clinical Report of the Rotunda.

A MEETING of this section was held on May 3rd, Mr. A. J. HORNE, the President, being in the chair.

Dr. H. JELLETT showed a specimen of Full-time Pregnancy Obstructed by a large Sub-peritoneal Myoma, which was interesting from the size of the tumour. The abdomen was opened, and a complete hysterectomy performed, which the

patient stood well, but she died in two or three days from sepsis.

Dr. JELLETT also exhibited a specimen of Suppurating Ovarian Vein removed in a case of Pyæmia, the first of the kind operated on in Ireland. On opening the abdomen a swelling was found in the right broad ligament, and extending upwards above the pelvic brim, getting smaller as it went upwards, and gradually tapering into a cord. On being cut a clot was found which proved it to be a vein. On reaching the uterus it widened out into the supplying venules. The patient made a very satisfactory recovery. The mortality after the removal of thrombosis of the ovarian veins associated with pyæmia was only 15 per cent., while in cases not operated on it was at least 60 per cent. In pyæmic conditions associated with thrombosis and rigors operation was indicated.—Dr. E HASTINGS TWEEDY congratulated Dr. Jellett on the first successful operation of the kind in Ireland, and Dr. JELLETT replied.

Dr. JELLETT, in introducing the Clinical Report of the Rotunda Hospital for the Year ending Oct. 31st, 1911, said that during the past clinical year 2241 patients were delivered under the care of the hospital in its extern department, and 2608 patients were admitted to the maternity wards. Of the latter number 400 who were not in labour were discharged undelivered, and 2208 were delivered. Thus a total of 4449 labours in all were attended by the hospital staff. Five deaths occurred in the extern department and 12 in the intern, being a percentage mortality of 0·22 in the former and of 0·54 in the latter, or a mean percentage mortality of 0·38. The most important event of the year had been the construction of the new labour wards, which had ample light and air, a good hot and cold water-supply, with suitable basins and sinks, hot and cold sterilised water, impermeable terazzo floor and walls, and the means of isolating septic patients. The suite consisted of a dressing-room with bathroom and lavatories, a large waiting ward, a large labour ward, a clerical room, a septic labour ward, and a kitchen. The only change of importance made during the year in the management of the hospital was in relation to the sitting up of patients in bed and of leaving bed during the puerperium. Eight cases of Cæsarean section were done during the year. The use of vaccines had been considerably extended. They gave very favourable results in most cases, but in established pyæmia they did not appear to be of use. In streptococcal infections, on the other hand, the results might be described as positively good. Shortly after taking office he substituted argyrol for nitrate of silver as a prophylactic in gonorrhœal ophthalmia, because he doubted the value of so strong a caustic as a prophylactic, and he had had excellent results at Dr. Steevens' Hospital with argyrol. But the proportion of cases of gonorrhœal ophthalmia appeared to increase after the introduction of argyrol, so nitrate of silver was returned to. The treatment of eclampsia had been continued on the lines introduced by Dr. Tweedy, except that he (Dr. Jellett) always gave chloroform during the washing out of the stomach and during any procedure that caused much stimulation of the patient. During the past year 604 patients were admitted to the gynæcological department—the largest number since the gynæcological wing was built. 511 operations were performed, with a total mortality of eight—i.e., 1·32 per cent. Of the 8 deaths, 7 occurred in patients suffering from malignant disease. Tables of prolapse operations showed that he had performed Wertheim's interposition operation on eight occasions, both alone and in association with his (Dr. Jellett's) method of shortening the utero-sacral ligaments. Finally, he referred to the fate which overhung the school under the Insurance Act, the immediate result of which would be the destruction of maternity hospitals and extern maternities throughout the kingdom, an enormous increase in the morbidity and mortality of childbed amongst the poor, and the cessation of all organised obstetrical teaching for medical students and pupil midwives, which would affect all classes.—Dr. HASTINGS TWEEDY congratulated the Master on his first report, but protested against compelling patients to get out of bed at the end of 48 hours. Apart from the danger of prolapse or backward displacements of the uterus, there was an element of inhumanity in denying a woman a long rest after the wearing months of pregnancy and delivery. Amongst the 14,000 infants born in the hospital during Dr. Tweedy's Mastership 19 developed ophthalmia. If silver nitrate caused inflammation this fact would have been duly recorded. In his opinion the development of ophthalmia in those 19 cases could be explained by the fact that occasionally a probationer nurse did not get the silver nitrate into the eye. Chloroform, if given in eclampsia, should be administered not more than 20 minims at a time, and at long intervals.—Dr. F. C. CRAWLEY, consulting ophthalmic surgeon to the Rotunda Hospital, said that if one of his patients ran the risk of gonorrhœal ophthalmia he would use 1 per cent. silver nitrate as a prophylactic, not as an antiseptic, but as a caustic. Even if silver nitrate was dropped into the eye of every child there would still be a certain number of cases of gonorrhœal ophthalmia and ophthalmia neonatorum.—Dr. W. M. CROFTON suggested finding out the cause of the ophthalmia neonatorum, which might be due to a variety of microbes, and treating it with vaccine.—Dr. M. J. GIBSON believed that the prone posture was unsuitable for patients that needed drainage. He agreed about the difficulty in vaginal Cæsarean section of incising the cervix when it could not be pulled down, but not as to the hæmorrhage, which was not very difficult to control after the uterus was emptied. He had found in cases of sepsis the greatest assistance from the use of small doses of vaccines, and had to thank Dr. Rowlette for his advice in this matter. In the Coombe Hospital he used a 1 per cent. solution of nitrate of silver as a prophylactic against ophthalmia, washing it out after three minutes with saline solution. The principal benefit to be derived from delivery in the first stage in cases of eclampsia was that it bled the patient. In his experience Wertheim's interposition operation without shortening the utero-sacral folds was unsuccessful in the treatment of complete prolapse, but most useful for cases of cystocele after the child-bearing period.—Dr. GIBBON FITZGIBBON did not see how Wertheim's operation could cure prolapse. There was nothing in it to support the cervix, and interposition done for that condition was accompanied by some form of shortening of the ligaments to the cervix. He considered that nitrate of silver had some function in ophthalmia which did not exist in either argyrol or protargol.—Dr. JELLETT, in replying, said that he would not advocate the use of argyrol as a treatment for ophthalmia. As to getting patients up, the patients themselves were in favour of it. In dealing with a case of placenta prævia he was of opinion that Cæsarean section would be entirely justifiable if the child was alive, if the placenta was central, and if the mother had not lost much blood. In all other cases Braxton Hicks's treatment was the best.

OXFORD MEDICAL SOCIETY.—A meeting of this society was held in the Radcliffe Infirmary on May 10th, Mr. R. H. A. Whitelocke, the President, being in the chair.—Dr. W. T. Brooks showed a case of Considerable Disorganisation of Both Knees, Elbows, and Wrists from Chronic Arthritis in a girl aged 16. The knees were bent and prevented any attempt at walking, and a double arthrectomy was proposed and was to be undertaken by Mr. E. C. Bevers.—Dr. W. Collier showed a woman, aged 29, who had just returned from a prolonged stay at Margate; she left the Radcliffe Infirmary with enormous cervical glands simulating those seen in Hodgkin's disease, but found to be tuberculous on the excision of a small gland. A general removal had been inadvisable owing to the number and size of the glands and the high temperature; her present condition was afebrile, and the glands had shrunk to an extent which permitted of the question of operation being taken into account.—Dr. W. Duigan then read a paper on the Use of Tuberculin in Phthisis, which was a record of a personal experience based on a number of cases treated by the intensive method. The aim of tuberculin treatment was to assist the natural method of repair; its action was to call forth a local hyperæmia, to promote fibrosis of the damaged area, and to stimulate the production of antibodies. In febrile cases, or those with secondary infections, the action was bad. Hæmorrhage was no bar to its use with proper caution. The forms of tuberculin used were then described, these being P.T.O., P.T., and T.A.O.; beginning with P.T.O., he raised the dose by gradual increments up to 1 c.c., subsequently doing the same for P.T. and sometimes for T.A.O. A number of cases were then briefly described, the result in most having been highly satisfactory. Dr. Duigan concluded his remarks by saying that in carefully selected afebrile cases treatment on this plan produced a sense of well-being in the patient subsequent

to the injection and a drying up of moist sounds in the lungs; moreover, this form of treatment was much cheaper than sanatorium treatment, and the patient, if at work, suffered no interruption.

Reviews and Notices of Books.

For and Against Experiments on Animals. Evidence before the Royal Commission on Vivisection. By STEPHEN PAGET, F.R.C.S. Eng., Honorary Secretary, Research Defence Society. With an Introduction by the Right Hon. the Earl of CROMER, O.M., G.C.M.G., G.C.B. London: H. K. Lewis. 1912. Pp. 326. Price 3*s.* 6*d.* net.

THE bitter attacks made upon the "vivisector" by the "antivivisectionist" are onslaughts sometimes upon individuals and sometimes upon groups of scientific inquirers; but they are also too often attacks upon the medical profession itself, denying its sympathy with suffering, impugning its veracity, and casting aspersions upon its honour. It is easy to say of the antivivisector that he is not worth replying to, that his words carry their own contradiction, and that he is unreasonable beyond the possibility of conversion to saner opinions. This may be true in some cases, but it is not true in all, while there is a motive of humanity behind the agitation against medical research which must always command respect as long as this motive is itself pure. When some very unreasonable people shout no one may think it worth while to reply, but there is a large class of intelligent bystanders at the controversies of the day who have little time to master a subject-matter that is entirely foreign to the circumstances of their daily lives, and yet these are important people in the progress of civilisation. The rulers of the country are elected with the aid of their votes, and, as Lord Cromer observes in his scrupulously fair and judicial introduction to Mr. Paget's compilation, "It depends mainly on the views held by non-controversialists representing the mass of public opinion in this country whether the cause of scientific research is to stand or fall."

In the guidance of this mass of public opinion Mr. Paget's volume should be extremely useful; and on the bookshelf of the medical practitioner it should also find a place because it will enable him to offer to those who ask him for a condensed opinion upon a somewhat wide subject a book that will give them facts as well as opinions, leaving them to judge for themselves between the witnesses on both sides. Should they think that either party has been treated unfairly by Mr. Paget, the Blue-book containing the evidence which he professes to summarise is easily and cheaply accessible. They will find in Mr. Paget's book the evidence of such champions of antivivisection as Mr. Stephen Coleridge, Miss Lind Af Hageby, Miss Arabella Kenealy, Lieutenant-Colonel Lawrie, and Sir George Kekewich. It is indeed a good plan to study their evidence first, and to analyse subsequently the resulting impressions, deciding whether these witnesses are convincing by the accuracy of their statements or the soundness of their reasoning, before turning to the rest of the book to see whether such first impressions are modified or confirmed by the defenders of the cause of research.

There are three main questions in connexion with the attack upon experimental medicine which specially demand consideration. 1. The ethical question. Are any, and if so what, experiments upon animals justifiable in order that pain to human beings or animals may be diminished? Lord Justice Fletcher Moulton's evidence, with his illustration of a rat-laden and plague-stricken ship, may be referred to as suggestive upon this point. Two questions of fact follow. 2. Have experiments upon animals resulted in the appreciable diminution of human suffering which would not otherwise have been accomplished? And 3: Are animals which are the subject of experiments subjected to pain that is cruel, unnecessary, and contrary to the law with regard to their anæsthetisation? The answer to the ethical question must remain to some extent a matter of feeling rather than reason. Lord Justice Fletcher Moulton's illustration is not, strictly speaking, an argument, although it shows to what a point their declared prejudices may reduce some if they obey them logically and conscientiously. But in regard to the two questions of fact, there will, we think, be no shadow of doubt left after a perusal of Mr. Paget's summary of the evidence—the accuracy of which, as we have pointed out, can easily be checked by reference to the official Blue-book[1]—that the whole weight of evidence is in support of the defenders of experimental research by means of animals.

The New Physiology in Surgical and General Practice. By A. RENDLE SHORT, M.D., B.S., B.Sc. Lond., F.R.C.S. Eng., Hon. Surgical Registrar, Bristol Royal Infirmary; Senior Demonstrator of Physiology, University of Bristol. Bristol: John Wright and Sons, Limited. London: Simpkin, Marshall, Hamilton, Kent, and Co. 1911. Pp. 201. Price 4*s.* 6*d.* net.

THE great specialisation that exists at the present time in all departments of medicine and its ancillary sciences leads to the result that the achievements of one branch may remain almost unknown to those working in some other branch, though they may be of equal importance to medical knowledge. The great strides that have been made of late in physiology have important bearings on many problems in both medicine and surgery, and it should prove very helpful to have some of the more recent discoveries in physiology put before the surgeon and the general practitioner. This has been done in this book by Dr. Rendle Short. Only some 12 subjects have been discussed, but they contain matter of much value.

The first chapter deals with the thyroid and the parathyroid glands, and after describing the facts on which our knowledge of these glands is based, the author summarises the conclusions that may be drawn from these facts; he explains the occurrence of parenchymatous goitre, and shows that excision of the thyroid gland should always be partial and that special care should be taken to avoid removal of the parathyroid glands, for if they be removed tetany will be produced. The value of calcium salts in the treatment of tetany is also mentioned, and reference is made to the utility of engrafting human parathyroid glands. The next chapter refers to the pituitary gland, and the effects of removal of it or of one or other of its parts are described; the clinical results of hypertrophy of the gland are discussed, and the similarity of the effects suggests the uses to which preparations of the gland may be put.

The chapter on studies in digestion and absorption will well repay perusal, for in this chapter we have the latest ideas as to the physiology of digestion, and Dr. Short points out the practical application of the facts. The value of the colon is discussed, and attention is drawn to the antiperistalsis which is so common a phenomenon of this portion of the bowel. The applied physiology of blood pressure also forms an interesting chapter, and its importance in relation to shock and its treatment is emphasised. The etiology of the hæmorrhagic diathesis provides data for the effective treatment of hæmophilia, and the suggestions here given should prove very helpful in these troublesome cases. Perhaps the most interesting of all the subjects with which

[1] Appendix to the Third Report of the Commissioners Minutes of Evidence, April to July, 1907. London: Printed for His Majesty's Stationery Office by Wyman and Sons, Limited, 1907. For sale also by Oliver and Boyd, Edinburgh, and E. Ponsonby, Dublin. Price 2*s.* 2*d.*

the book deals are acidosis, acetonæmia, and diabetes, and from the recent advances in physiology reasons are given for the occurrence of diabetic coma and of delayed chloroform poisoning. The sections on nerve injuries and on the surgical physiology of the spinal cord and cerebral localisation are well done.

We have said enough to show the value this book might have for practitioners, and we hope that it may appear in a second edition, in which yet other applications of recent physiology to surgical problems may be described. It deserves a wide circulation.

The Prevention of Dental Caries and Oral Sepsis. By H. P. PICKERILL, M.D., Ch.B, M.D.S. Illustrated. London: Baillière, Tindall, and Cox. 1912. Pp. 308. Price 7*s.* 6*d.* net.

THIS thoughtful and interesting essay was awarded the Cartwright prize of the Royal College of Surgeons of England for 1906-10. The author is to be congratulated upon the scientific work he has done on the etiology of caries of the teeth, for he has opened up several fresh fields of thought in connexion with this very important question—even if, as far as prevention is concerned, he adds little to the lines of treatment laid down by Dr. J. Sim Wallace and Dr. Stanley Colyer.

The forces of natural protection against caries are considered under two heads—namely, the passive, or enamel surface, and the active, or the oral secretions. With regard to the enamel, the author has brought forward fresh facts to show that the enamel plays an important part in the degree of resistance to caries. Teeth he divides into three clinical groups: (*a*) Native teeth, or those found in uncivilised races; (*b*) sclerotic teeth, or those clinically known as hard teeth; and (*c*) malacotic teeth, or those clinically known as soft teeth. He demonstrates in an ingenious way that the enamel is not smooth, but is traversed by minute ridges running parallel to each other in a direction at right angles to the teeth. These horizontal lines he terms "imbrication lines," and finds that they bear a definite relationship to the so-called "striæ of Retzius," and that they are most marked in malacotic teeth and least marked in native teeth. He demonstrates that the density, the hardness, and the solubility of enamel vary, the results all being in favour of the resistance of the native teeth.

Dr. Pickerill gives us details of an extended investigation into the oral secretions, and comes to the conclusion "that the saliva is a natural and potentially perfect mouth-wash acting continuously day and night; that it is completely under control; that it may be altered and varied in amount or composition; and that its beneficial effects may be increased or decreased absolutely at will." The dietetic question is reviewed, particular attention being given to the diet of races relatively immune to caries. The means or methods to be adopted to prevent caries are given, and the author in his preface states that the condition which is known as "arrested caries" has, in fact, been established.

On Bronchial Asthma: its Pathology and Treatment. By J. B. BERKART, M.D. Würzburg. Revised and enlarged. Third edition. Oxford University Press: Henry Frowde. 1911. Pp. 150. Price 5*s.*

THE view generally held with regard to bronchial asthma is that the asthmatic paroxysm is due to a muscular spasm of the smaller bronchi. Dr. Berkart, however, asserts that it is "due to a transient endogenous obstacle in the bronchial tree." The argument with which he supports his view is quite unconvincing when compared with the researches of Hyde Salter, Reisseisen, Brodie, Dixon, Watson Williams, and others. Dr. Berkart appears to brush aside the facts that involuntary muscle fibres surround the bronchi and can constrict them, that these fibres are supplied by the vagus nerve, and that stimulation of the nerve causes constriction of the tubes. He simply says: "There is no foundation for the assumption of a bronchial spasm." The observations of the authorities we have just mentioned, to which may be added those of Jaccoud and Germain Sée, have rendered the hypothesis of muscular spasm a reasonable and satisfactory explanation of the facts, and the objections raised by Dr. Berkart are susceptible of but little support.

Nor does the clinical description given by Dr. Berkart tend to give confidence to his conclusions. He states that in a typical attack there is very frequently a well-marked prodromal stage like that of an acute infectious process which may last for days before the acme is reached; that then there is shivering, or even a rigor; that the temperature rises and fluctuates between 101° and 104° F.; and that various general symptoms, malaise and so on, are manifested, in addition to the cough and dyspnœa. Every physician is familiar with attacks of this nature, and will admit that in such cases there are characteristic changes in the mucous membrane of the respiratory tract. In describing the pathology of the condition as exhibited by post-mortem findings his remarks again lack conclusiveness. The cases he describes may well find another explanation than the one he gives. He tries to prove that the morbid changes cause the asthma, whereas the opinion generally held would be that they were the results and not the origin of the repeated asthmatic paroxysm. With the general trend of Dr. Berkart's arguments we cannot agree.

Étude sur les Fractures de l'Extrémité Inférieure de l'Humérus chez l'Enfant (Résultats Éloignés). Par le Dr. ANDRÉ TRÈVES, Ancien Interne des Hôpitaux de Paris et de la Clinique Chirurgicale Infantile de la Faculté, Assistant de Chirurgie Orthopédique à l'Hôpital des Enfants Malades, &c. With 10 plates. Paris: G. Steinheil. 1911. Pp. 288. Price 10 francs.

THIS is a valuable contribution to our knowledge of the injuries of the lower end of the humerus in children. The book does not deal with the symptoms, the diagnosis, or the mode of production of the fractures of this part of the humerus, but the author has confined himself to an account of the pathological anatomy, the treatment, and the distant results of these fractures.

Out of a large number of fractures of the lower end of the humerus in children, the author has been able to trace 163 cases; and of these 79 were supracondylar, 42 were fractures of the external condyle, and in one of these the injury was bilateral; in 34 cases there was a fracture of the internal condyle, and in 33 of these there was dislocation of the elbow; in 5 cases there was complete separation of the epiphysis; in 1 there was an intra-articular separation of the epiphysis, and in 2 cases there was a T-shaped fracture. Of the 160 cases in which the sex of the patients was noted, 118 were boys and only 42 were girls. The main object of the research was to find what was the ultimate result of these fractures, and the author has been led to the conclusion that the general view that the prognosis as to functional use in these cases is very grave is incorrect; and he considers that it has been formed from the observation of the more severe cases which have returned for further treatment, while the milder cases have not been seen, except for a short time after the injury. Of the 163 cases of injury to the lower end of the humerus, only 4 showed a really bad result; in 12 there was a fairly good result, while in all the others the ultimate condition was all that could be desired.

Dr. Trèves considers the treatment to be very important, and he claims that in all of these cases, except when there has been a supracondylar fracture produced by over-flexion, the treatment should be by fixation in the flexed position. Free mobility always returns slowly in fractures of the lower end of the humerus; in simple cases it may be delayed for weeks, while in the more severe cases recovery may be delayed for months or even years. When the movement at the elbow-joint is limited, the limitation is in flexion in the supracondylar fractures, while it is usually in extension in the other forms. The author concludes with the expression of the opinion that the form most likely to be followed by permanent disability is fracture of the external condyle.

The book contains 421 illustrations of different cases of fracture, and also 10 skiagrams. It is a valuable contribution to surgical literature.

The Housing, Town Planning, &c., Act, 1909 (9 Edw. VII., Ch. 44), with Incorporated Provisions of the Housing Acts, and all Orders issued by the Local Government Board, together with Full Explanatory Notes and Index. By WILLIAM A. CASSON, Barrister-at-Law of the South-Eastern Circuit. Third edition. London: Charles Knight and Co., Limited. 1912. Pp. 348. Price 10*s.* 6*d.* net.

Mr. Casson's third edition, as he himself points out, constitutes a work upon a different scale from the small paper-bound volumes of 148 pages which sufficed to contain in the first two editions the text of the Housing and Town Planning Act with introduction and notes by Mr. Casson and Mr. Athelstan Ridgway. In the present edition Mr. Casson's name appears alone upon the title-page, an acknowledgment of indebtedness to his former collaborator for assistance in the compilation of the notes being made in the preface.

The ample development of the present work is due partly to the existence of new matter necessarily incorporated with the old, such as regulations issued by the Local Government Board, and partly to the inclusion of all that is necessary of the Housing of the Working Classes Acts, 1890 to 1893, which with Part I. of the Housing, Town Planning, &c., Act, 1909, constitute the Housing of the Working Classes Acts, 1890 to 1909. In addition to these contributories to increased bulk there has been the opportunity afforded by time for the consideration and addition of explanatory notes and suggestions devised for the benefit of those who have to administer a novel and important measure of social reform. "Open spaces" is, we believe, a term first recognised and legally defined for the purpose of town planning, and "amenity" has not before been considered and provided for by the legislature side by side with "proper sanitary conditions" as an object to be secured by a local authority in regulating its area. Thus, to give an example, three important sections, 54, 55, and 56, relating to town planning and to the issue of regulations with regard to it by the Local Government Board, are discussed in notes filling over 40 pages, which will be found suggestive and useful beyond the explanation which they afford as to the strictly legal aspects of the work to be done. Important notes have been appended to Section 68, the first section of Part III., which makes obligatory the appointment of county medical officers of health and defines their positions. In these notes there are observations as to the attitude of the Local Government Board towards the question of medical officers of health combining with their duties those of the school medical officer, the full text of the Board's order as to the duties of medical officers of health, together with the explanatory circular of July 10th, 1910, which accompanied it, being printed in an appendix.

A book which contains so much would be improved by a more copious and systematic index, one containing references not only to the Act itself and to the notes appended to the sections, but to forms and other matters dealt with in appendices.

Die Heteroplastische und Homoplastische Transplantation: eigene Untersuchungen und Vergleichende Studien. Von Dr. GEORG SCHÖNE, I. Assistent der Königlichen Chirurgischen Klinik zu Marburg. Mit 29 Text Figuren und 1 Tafel. Berlin: Julius Springer. 1912. Pp. 161. Price, paper, 8 marks; bound, 9 marks.

THE question of transplantation took a new departure when it was shown that organs important to life, such as a thyroid or a kidney, could be transplanted and survive in the same animal—the so-called *autoplastik*. It was surmised that perhaps it might be possible by implantation of a healthy organ from one human being to replace a worn-out organ—*homoplastik*; or an organ might be used from another species—*heteroplastik*. These hopes were not fully realised, and, indeed, cannot be until the fate of transplanted organs has been thoroughly investigated, a subject with which this memoir deals. The work of Marchand and others is fully recognised. The author gives a full account of his experiments in 70 tables, dealing with experiments such as transplantation of skin in mice, frogs, birds, and rats. In 19 operations on mice skin from the back was implanted on the same animal, but with the caudal end of the skin fixed towards the head. The hair always grew in the abnormal direction—i.e., forwards. Experiments were also made on frogs and canaries—autoplastic skin transplantation succeeded. In eight adult mice transplantation of skin from young mice having no blood relationship with the adult mice healing did not take place. In a certain number of cases with blood relationship the graft was successful. The skin of a frog was transferred to a mouse, but it did not functionally replace the lost skin.

The author takes a wide view of his subject, and he insists that the surgeon should take into account the experimental results of the pathology of tumours and also of those of botanical and zoological experiments. He details some excellent and painstaking research, which should be of suggestive value to plastic surgery.

Microbes and Toxins. By Dr. ETIENNE BURNET, of the Pasteur Institute of Paris. With a Preface by ÉLIE METCHNIKOFF. Translated from the French by Dr. CHARLES BROQUET and W. M. SCOTT, M.D. Edin. Illustrated. London: W. Heinemann. 1912. Pp. 316. Price 5*s.* net.

THE original work forms one of the series of the Bibliothèque de Philosophie Scientifique, and this gives some indication of the scope and intention of the book. It is not a systematic text-book of microbiology—there is indeed no description of individual micro-organisms—but it deals with the general principles that underlie the many-sided relations of micro-organisms to infectious disease. It is one of those works which French authors seem to be especially skilful in producing—works which, while they treat their subject in the broadest possible way and in a manner to interest the educated general reader as well as the specialist, are yet at the same time accurate and precise in detail.

An introduction is furnished by Professor Metchnikoff, and the book, as might be expected from its source, is strongly tinged with the ideas of the French school of microbiology. The protozoa, as well as bacteria, are considered, and illustrations of the actions of these organisms are drawn from the widest area not confined to human disease, but it is, after all, with the problems of infection and protection in man and the higher animals that the work is chiefly concerned. A glance through the chapter headings would not differentiate this book from numbers of others, but the treatment of the

subjects differs considerably from that of the usual text-book, and not least in its stimulating indications for progress. Commencing with the general functions of microbes in nature we pass to a consideration of their relation to the nutrition of man, and so to the subject of the intestinal bacteria and Metchnikoff's well-known views thereon. In the chapter on the form and structure of microbes considerable attention is directed to the question of the existence of a nucleus in bacteria and to Schaudinn's view that there is evidence of a rudimentary sexual process in such organisms as form endospores. The chapter dealing with the toxins is, perhaps, one of the least satisfactory, but this is largely due to the very small amount of precise knowledge we possess, although the literature is extensive. Immunity problems are viewed chiefly from the cellular standpoint, though at the same time the humoralistic ideas are very fully and fairly represented, though with a slight bias towards the explanations of Bordet rather than those of Ehrlich. The chapters on these subjects are full of suggestive ideas, as are those on anaphylaxis, vaccines and sera, and chemical remedies. These latter agents the author regards with considerable hopefulness.

The author has been fortunate in his translators, who have accomplished their task with unusual skill. Portraits of Pasteur when at the École Normale (1845–46) and of Metchnikoff adorn the book, and there are numerous and sufficient diagrams. The printing and appearance of the book are satisfactory.

LIBRARY TABLE.

The Medical Annual: A Year Book of Treatment and Practitioner's Index. 1912. Bristol: John Wright and Sons, Limited. Pp. 887. Price 8*s.* 6*d.*—This is the thirtieth year of this well-known publication, and its contents show the large amount of practical work which has been accomplished during the past year. In addition to a review of the therapeutic progress which has been made in 1911 and a "dictionary of treatment," indicating the various advances and innovations in medicine and surgery, the manual contains much information that is instructive and interesting. Mr. C. Thurstan Holland contributes a short article on Radio-activity in Diagnosis and Treatment. He remarks that during the past year, without any distinctly new advance in application, the general technique of X ray work has improved in nearly all directions, and that the use of the rays, more especially in diagnostic work, has been considerably extended in various conditions. He refers to the discussions which have taken place in this and other countries, and gives a *résumé* of the principal points that have been established. He makes special reference to the use of the rays in connexion with gastro-intestinal conditions, and the deductions that may be drawn from the combined use of bismuth and the X rays, particularly in regard to diagnosis. Dr. Stéphane Leduc, professor at the School of Medicine, Nantes, discusses ionic medication and its therapeutic application. Under the heading "Public Health," this portion of the volume being edited by Dr. Joseph Priestley, medical officer of health of Lambeth, is an interesting summary of some of the more important medico-legal cases heard during the year, and also brief references to certain matters concerning public health, such as the Tuberculosis Regulations for 1911. There is a short outline of the National Insurance Act by Mr. H. Wippell Gadd, barrister-at-law, indicating the principal ways in which the Act will probably affect the medical profession. The various contributors have performed their tasks carefully, and this volume fully maintains the high standard which characterised its predecessors.

Hématologie et Cytologie Cliniques. Par le Dr. E. LEFAS, Ancien Interne des Hôpitaux de Paris. Préface par P. E. LAUNOIS, Professeur Agrégé à la Faculté de Médecine de Paris. Deuxième édition entièrement refondue. Paris: J. B. Baillière et Fils. 1912. Pp. 299. Price 4 francs.—In this, the second, edition of this convenient little handbook to clinical hæmatology and cytology many additions relating to staining methods, histogenesis, the normal blood formulæ at different points of life and in various animals, trypanosomiasis and piroplasmosis, malaria, syphilis, and so forth, have been made. The first part, which deals with hæmatology, is divided into 3 sections. Of these, Section 1 details the technique of blood examinations; Section 2 describes the normal and abnormal morphology of the blood; and Section 3 describes the usual blood findings in 131 morbid conditions in alphabetical order. The second part, which deals with cytology, considers the cellular elements of the cerebro-spinal fluid, of various effusions, of cysts, the gastric fluid, the sperma, vaginal discharges, milk, the amniotic liquid, pus, expectoration, urine, and other matters. There are four coloured plates and many figures in the text. The first edition was introduced with a commendatory preface by Professor Launois, which is reprinted in the present work.

The Review of Bacteriology, Protozoology, and General Parasitology. New Series, Vol. I., Part 1. London: Science Reviews, Limited. Price 10*s.* 6*d.* per annum.—Our readers will doubtless remember that for some years Dr. Andrew Balfour, of Khartoum, has compiled a very useful digest of the literature relating to the medical sciences, and the more recent advances in tropical medicine, hygiene, and tropical veterinary science, and published this as a supplement to his biennial reports on the work of the Wellcome Research Laboratories (*vide* THE LANCET of April 24th, 1909, p. 1184, and April 20th, 1912, p. 1061); but at the end of 1911, finding that the pressure of other urgent duties prevented him from devoting sufficient time to the digest, Dr. Balfour reluctantly gave it up. Arrangements, however, were made by which Mr. Alexander G. R. Foulerton, of the Middlesex Hospital Medical School, who had exceptional qualifications for the task, took it over, and it was then published as a monthly supplement to our contemporary the *Medical Officer*. But in less than six months it has been found necessary to extend the scope of the digest, and as a result it will in future appear five or six times a year as a separate "Review" under the joint editorship of Mr. Foulerton and Dr. Charles Slater, assisted by Dr. S. Roodhouse Gloyne and Dr. H. K. Whittingham. It will give a brief summary of recent literature of the parasitology and pathology of infective diseases and of laboratory methods. The first number of the new series just issued contains *précis* of no fewer than 100 papers published in continental and other journals; they are classed under various headings, such as the parasitology and general pathology of specific infective diseases; infection and immunity; serology of infective diseases; general bacteriology, including the bacteriology of food, water, soil, and air; disinfection; the specific treatment of infective diseases, &c. We wish the new "Review" every success.

Der Elektrochemische Betrieb der Organismen. By Dr. GEORGE HIRTH. Fourth edition. Munich: Published by the Publishers of *Jugend*. 1911. Pp. 260.—Dr. Hirth, the author of this book, is the well-known editor of the German journal *Jugend*. He is, as he tells us, neither a professed biologist nor a practising physician. He may not be very profound, and he is certainly not very orthodox, but he has, at all events, produced an interesting and stimulating book. He has written a previous work on the "Mutterbrust," and it was apparently in the study of the mother's milk that he

stumbled on his theory of "Nature's Electrolyte." He regards the blood and lymph not so much as a nutritive fluid as a supply of force and electricity, and the electrolytic solutes therein as the motive power as well as the conducting medium for the transference and transformation of electrical energy. As pointed out in a letter from Ostwald to the author, the idea that electro-chemistry plays a predominant rôle in biology and medicine is not a new one. It has been insisted on by many previous electrical authorities, from Helmholtz and Dubois-Reymond to Hamburger and Loeb. The idea, however, has been still further elaborated and is worked out with considerable originality by the author. The chapters on Alcoholic Poisoning, on Death from Salt-Hunger, and on Saline Infusion are particularly interesting, as is also that on the Architecture of the Brain as an Electrical Organ. The present volume is a new and enlarged edition of what was originally a series of isolated articles rather than a complete and finished work. Anyone who does not care to wade through the somewhat discursive and colloquial German of the original may obtain a good idea of the argument from an abridged translation which has recently appeared in the *Archives of the Roentgen Ray*.

Semeiotica Fisica e Funzionale. Breve Compendio dei Metodi di Esame degli Infermi. Del Dott. UMBERTO GABBI, Professore Ordinario di Clinica Medica nella R. Università di Messina. Seconda edizione. Milan: Ulrico Hoepli. Pp. 388. Price 3 50 lire (3*s.* 6*d.*)—For those who understand Italian this is a handy and compendious little volume on the physical examination of the patient. It is divided into the following sections: Introduction; the Clinical History; the Present Condition of the Patient; the Respiratory Apparatus; the Circulatory Apparatus; the Abdomen; the Blood; and the Nervous System. Through the use of a suitable foreign handbook side by side with an English text-book by the student desirous of acquiring a reading knowledge of a particular tongue, a wide acquaintance with foreign technical terms is attainable. Dr. Gabbi's book is admirably suited to serve that purpose in regard to Italian.

Die Perorale Intubation. Ein Leitfaden zur Erlernung und Ausführung der Methode mit reicher Kasuistik. Von Dr. FRANZ KUHN, Elisabeth-Krankenhaus in Kassel. Mit einem Vorwort von Geh. Rat Prof. Dr. O. HILDEBRAND, Direktor der Chirurg. Klinik in der Kgl. Charité in Berlin. Mit 22 Abbildungen. Berlin: S. Karger. 1911. Pp. 162. Price 5 marks.—Briefly stated, this monograph advocates the intubation of the larynx by means of a long, flexible, metal spiral tube passed through the mouth in preference to tracheotomy in operations upon the nose, the jaw, the palate, and the throat. Professor Hildebrand, in his prefatory note, dismisses as unfounded the apprehension, at one time entertained by himself and many surgeons, that a long tube in the larynx and trachea can cause harm. Dr. Kuhn points out that the fear that such a tube passed into the larynx and trachea is liable to act as a foreign body and cause irritation is erroneous, and explains the error by a distinction not having been made between the effects of the presence in these regions of a solid and a hollow foreign body. The first chapter deals with peroral intubation in veterinary examinations and veterinary surgery. The technique is fully described and illustrated in another chapter, and descriptions are given of surgical operations upon the head in which this method is of service. The monograph concludes with a bibliography of the literature upon the subject. A method of intubation that will save a patient from tracheotomy is obviously deserving of attention, for should intubation fail tracheotomy could still be resorted to.

MISCELLANEOUS VOLUMES.

WE have received a number of volumes of collected papers from laboratories, reports, and proceedings of various societies, some of which may conveniently be summarised here. The amount of admirable work which is now chronicled in these periodical issues is becoming a marked feature of scientific literature.

In the *Collected Papers from the Department of Pathology in the University of Oxford* (Vol. I., 1909–1911) Alexander G. Gibson describes and illustrates in a paper on the Primitive Muscle Tissue of the Human Heart a number of different types of cardiac muscle fibres. The sites where they can be found are indicated, and suggestions are made as to their differences in function. In Observations on the Production of Immune Substances Georges Dreyer and E. W. Ainley Walker confirm the view that complement is a product of the leucocytes of the blood. In regard to the production of specific antibodies, the authors find that in animals immunised against B. coli an injection of staphylococcus will call forth an increase in agglutinin so long as a certain amount of acquired immunity remains. The same authors, in a paper on the Difference in Content of Agglutinins in Blood Serum and Plasma, say that the plasma yields an amount of agglutinin which has been given to it by those tissues (leucocytes and other tissues) which secrete it; the serum contains this amount, together with that given up by the leucocytes in the clot—minus that absorbed by the clot itself. Georges Dreyer and W. Ray, in some Observations on the Relationship between the Blood Volume and the Total Amount of Agglutinin Recoverable from Actively and Passively Immunised Animals, state that in highly immunised animals, of the amount of agglutinin which can be recovered by washing out the circulatory system, 30 per cent. of the recovered agglutinin is obtained from the fixed tissues. The method of injecting agglutinin into non-immunised animals and the determination of the agglutination of the total washings compared with a sample taken before washing is found to be a reliable one for the determination of blood volume. Georges Dreyer and J. Sholto C. Douglas discuss the Velocity of Reaction in the Absorption of Specific Agglutinins by Bacteria and the Adsorption of Agglutinins, Trypsin, and Sulphuric Acid by Charcoal. They say that no judgment can be formed from the rapidity or slowness with which equilibrium in the absorption of agglutinins by specific bacteria is attained as to the nature (absorption or adsorption) of the interaction between an absorbing material and a substance absorbed. The same authors, in a paper on the Absorption of Agglutinin by Bacteria and the Application of Physico-Chemical Laws thereto, state that the combination of agglutinin and bacteria is a very complex process. When constant amounts of bacteria are treated with gradually rising concentrations of specific serum the quantity of agglutinin absorbed may increase up to a certain concentration, and decrease if the concentration be raised further. This interaction may possibly be of the same nature as the interaction of bacterial toxins and antitoxins. Ainley Walker, in a paper on Variation and Adaptation in Bacteria, illustrated by Observations upon Streptococci with Special Reference to the Value of Fermentation Tests as applied to these Organisms, finds that the reactions of stains of streptococcus in the Gordon's sugar media vary considerably, show no constancy, and by manipulation of the culture may be made to vary greatly. These reactions, therefore, cannot be used to differentiate varieties of streptococci. Alexander G. Gibson, in a communication on the Diuresis of Chill, says that the diuresis that occurs on exposure to cold is too great to be accounted for by diminished loss of water from the skin. The diuresis

may coincide with or follow the exposure. The blood pressure corresponds closely to the time of the exposure, but not necessarily to that of the diuresis. The Action of Various Aniline Dyes on Certain Micro-organisms is discussed by S. G. Kriegler. The power of various aniline dyes and some other antiseptics is examined against several micro-organisms. Very great differences are found in the reaction of different organisms to one dye and of different dyes to one organism. It is not possible, therefore, to conclude that because a particular antiseptic is very active against a particular organism it will necessarily be active against another organism. E. Wheal and A. Chown present a Method of Staining for Clubs in Actinomyces. Studies in the Experimental Analysis of Sex, by Geoffrey Smith (Part 5), was abstracted in THE LANCET of May 6th, 1911, p. 1213. In Part 6, which follows, Geoffrey Smith finds that the marked increase in area of the hen's comb coincides with the period of egg laying. It is due to a deposit of fat in the central core of the comb. The cock's comb contains very little fat and exhibits no fluctuations. The fatty infiltration in the hen is due to the fatty content of the blood, which is conveyed to the ovary for the formation of the yolk of the egg. In a preliminary note on the Nature of Gram-staining, by G. Dreyer, S. G. Scott, and Ainley Walker, it is stated that the characteristic staining by Gram's method is due to the presence in Gram-positive organisms of lecithin and to its absence in Gram-negative organisms. The blood volume of mammals as determined by Experiments upon Rabbits, Guinea-pigs, and Mice, and its Relationship to the Body Weight and to the Surface Area Expressed in a Formula, is the title of a paper by Georges Dreyer and William Ray. Numerous careful experiments by washing out, by bleeding, and by the Welcher method show that the blood volume of these three animals can be determined by the formula $B = \frac{W^{\frac{2}{3}}}{K}$, where B is the blood volume in cubic centimetres, W the weight of the animal in grammes, and K a constant depending on the species of animal. This shows that the blood volume has a definite relation to the surface area and not to the weight, as has hitherto frequently been supposed. The authors doubt if the carbon-monoxide method gives accurate results.

The *Collected Papers of the Research Department of University College Hospital Medical School* Director: Dr. Charles Bolton (Vol. I.) is a collection of papers by various authors on different subjects of medical research, all of which papers have been published in one or other of the principal medical or special journals. There are several papers by Dr Thomas Lewis on researches by himself and in collaboration with others into subjects connected with the heart; and others by Dr. Charles Bolton on matters relating to Gastric Ulcer. Also papers by Mr. S. B. Schryver, on investigations dealing with the State of Aggregation of Matter; by Dr. A. G Levy, on Sudden Death under Light Chloroform Anæsthesia; by Dr. Charles Bolton and Dr. A. M H Gray, on the Occurrence of Fluid in the Abdominal Cavity of Pregnant Rabbits; by Dr. T. R. Elliott and Mr. R. G Armour, on the Development of the Cortex in the Human Suprarenal Gland and its Condition in Hemicephaly; by Mr R W S. Walker, on Congenital Heart Disease; and by Mr A E Cohn, Dr. Gordon M. Holmes, and Dr. Thomas Lewis, on a Case of Transient Attacks of Heart Block, including a Post-mortem Examination.

In the *Transactions of the Thirty-third Annual Meeting of the American Laryngological Association*, held at Philadelphia, May 29th, 30th, and 31st, 1911 (New York: Published by the Association, 1911. Pp. 315), a preliminary report on Passive Immunisation in Diphtheria of the Upper Respiratory Organs is made by Dr. Henry Lewis Wagner. He has no difficulty in accepting the view that local passive immunisation will lessen the number of diphtheria germ carriers, a most welcome result in view of the fact that the latent form of the disease is very difficult to exterminate. Amongst other contributions is a paper by Dr. Fletcher Ingals on Vaso-motor Rhinitis, and one by Dr. C. W. Richardson on Vaso-motor Disturbances of the Upper Air Tract. Papers on Diseases of the Accessory Sinuses of the Nose are contributed by Dr. G. L. Richards, Dr. W. E. Casselberry, and Dr. J. E. Newcomb; and papers on Diseases of the Tonsils and their Treatment by Dr. A. C. Getchell, Dr. A. B. Thrasher, Dr. G. Hudson Makuen, Dr. J. M. Ingersoll, and Dr. F. E. Hopkins.

Some papers of general interest are to be found in the *Annual Reports for 1911 of the Royal Dental Hospital for London* (London: John Bale, Sons, and Danielsson, Limited. 1912. Pp. 174. Price 5s. net). Among these may be mentioned an interesting Study of Heredity in Teeth and Jaws, by J. G. Turner; Periodontal Disease, by J. F. Colyer; Septic Conditions of the Teeth in Relation to Superficial Glossitis, by the same author; while A. Hopewell-Smith records four cases of interest. But a startlingly iconoclastic article is that of J. G. Turner, on the Value of the Teeth. He examines the general estimate of the value of the teeth in respect of (1) use, and (2) beauty. With regard to use, he asserts that mastication by the teeth is totally superfluous for stimulating the flow of saliva, for which taste, smell, the presence of food in the mouth, or even the sight of food is amply sufficient; that the movements of the tongue, gums, cheek, and lips amply suffice to incorporate the saliva in the case of the hardest cereal food; that saliva is needless for meat, and that meat can be reduced to far finer proportions with the knife and fork than with the teeth; that to excite the flow of gastric juice the same stimulants as in the case of saliva are equally efficient, and that in the absence, as in the presence, of teeth; and that the gums are of a tough fibrous structure, capable in the absolutely edentulous mouth of dealing with all ordinary food; for it is only in the presence of unclean teeth and dentures that they become soft, spongy, and tender. The author expresses the opinion that half the sickness of the human population of the British Isles is due to oral sepsis, and that this, in turn, is the product of the teeth, partly natural and partly artifact, due to rough and overlapping stoppings, ill-fitting crowns and bridges, and unclean dentures. As to beauty, he asks what beauty there is in the muddy complexion, the hollow cheek, the dull and sunken eye of chronic sepsis. He concludes: "Get free of the obsession that teeth are essential to life, and in place remember always that to-day oral sepsis is beyond question the most important and the most preventable factor in the production of disease."

Much information of practical value is contained in the *Transactions of the Thirteenth Annual Conference of the American Hospital Association*. Vol. XIII. (Toronto: Office of the Association. 1911. Pp. 512.) Among the many details dealt with are methods of giving anæsthetics and rank and salaries of anæsthetists, various sorts of baths, adjustable maternity beds, admission of delirium tremens patients, training of departmental heads, dietary problems, discipline, nomenclature of diseases, homes for domestics and hospital employees, hospital construction, hospitals and medical teaching and research, methods of hospital support contrasted, cause of increased cost of maintenance, the question of individual purchasing or coöperative purchasing by a central body, nurses as patients, registration and salaries of nurses, paying patients, and so forth. Among the most interesting papers are European Hospital Notes, by the secretary, Dr. J. N. E. Brown, of Toronto;

Details and Equipment of the Hospital, by Mr. Edward F. Stevens; and Hospitals, Medical Education, and Research by Mr. Abraham Flexner, of the Carnegie Foundation. An interesting feature is the "Question Drawer," in which specific questions put by the members with due notice are answered in open session, after the Parliamentary method.

The American Medical Editors' Association, which is composed of members of the editorial staffs of the large number of medical journals of various merit published in the United States and Canada, holds its annual meeting usually at the place and time of the annual meeting of the American Medical Association. The *Proceedings* of its forty-second annual meeting, held at Los Angeles in June, 1911, contains the following papers, from the titles of which some idea of the scope of the association may be gathered: "The Future of American Medical Journalism," by Dr. W. J. Robinson; "The Medical Reporter from His Own Standpoint," by Dr. E. Franklin Smith; "The Influence of Medical Journalism for Medical Progress," by Dr. William Benham Snow; "Eponymics," by Dr. Winslow Anderson; "What Shall we Publish?" by Dr. J. R. Phelan; "The Literary Side of Medical Journalism," by Dr. T. D. Crothers; "Physical Therapeutics in the Medical Press," by Dr. Mary L. H. Arnold Snow; "Hospital Publications as Factors in Medical Journalism," by Dr. G. W. Kosmak; and "The Extension of Advertising in Medical Journals," by Mr. S. De Witt Clough. By the death of its president, Dr. Walter Wyman, Surgeon-General of the United States Public Health and Marine Hospital Service (an obituary notice of whom was published in THE LANCET of Dec. 16th, 1911), the presidency of the association now devolves on Dr. Thomas L. Stedman, editor of the *Medical Record*, of New York.

JOURNALS AND MAGAZINES

The Journal of Hygiene. Edited by G. H. F. NUTTALL, J. S. HALDANE, A. NEWSHOLME, C. J. MARTIN, J. C. G. LEDINGHAM, and G. S. GRAHAM-SMITH. Vol. XII. No. 1. May, 1912. Cambridge University Press. Price 7*s.* 6*d.*—In A Note on the Inter-classification of the Gaertner Group, by W. A. Savage, these bacilli are divided into (*a*) true Gaertner bacilli and (*b*) para-Gaertner bacilli. The latter, which are uncommon in healthy animals, can be distinguished by their property of fermenting salicin and glycerin. They are for the most part non-pathogenic and fail to be appreciably agglutinated by sera obtained by immunising animals with any of the members of the true Gaertner sub-group. An Examination of Some Factors influencing the Rate of Infant Mortality, by Major Greenwood and J. W. Brown, is a most valuable paper, which should be studied by all interested in the methods of statistical science. An Historical Document relating to the Prevention and Cure of Plague in Spain in 1600–1601, by Zelia Nuttall, is a translation of a curious document found in the National Library at Madrid. A Rapid Gravimetric Method of Standardising Vaccines by W. J. Wilson and C. Dickson, describes methods for rapidly evaporating to dryness bacterial emulsions contained in tarred flasks and from the increase in weight determining the strength of the emulsion, and of drying bacteria smeared on a tarred piece of platinum foil, and from the dry residue preparing a vaccine. The authors claim that with a sensitive balance constant results are obtained, that the method is more rapid and involves no eye strain, and that it can be applied to cultures of all bacteria growing on solid media. A paper on Additional Notes on the Potassium-sulpho-cyanide Neutral-red Glucose Blood Serum Medium, by T. T. Rankin, describes a medium for the diagnosis of diphtheria. On this medium diphtheria bacilli produce red colonies, whereas Hofmann's bacillus and certain other diphtheroids produce colourless colonies. The medium is said to render the diagnosis of diphtheria bacilli when present in small numbers easy. Immunity of Guinea-pigs to Diphtheria Toxin and its Effects upon the Offspring, Part 3, by H. J. Sülmersen and A. T. Glenny, is a continuation of a previous paper on the subject. In a paper on the Effects of Dosage in Typhoid Vaccination of Rabbits, J. H. Smith and R. St. S. Brooks show that after the subcutaneous injection of typhoid vaccine the average antibody response, as estimated from day to day, varies for agglutination, bactericidal action, phagocytosis, and "precipitation," according to the dose of vaccine. The response increases usually with increasing doses, but becomes relatively less as the dose increases. The observed relationship between dose and effect is such as to suggest that the combination of antigen and reacting-cell takes place in accordance with the rules governing adsorption processes; but this does not hold good for the response in bactericidal power.

Quarterly Journal of Microscopical Science. Edited by Sir E. RAY LANKESTER, K.C.B., F.R.S., with the coöperation of ADAM SEDGWICK, M.A., F.R.S., SYDNEY J. HICKSON, M.A., F.R.S., E. A. MINCHIN, M.A., F.R.S., and GILBERT C. BOURNE, M.A., F.R.S. London: J. and A. Churchill. April, 1912. Price 10*s.* net.—The opening article of this number possesses considerable interest for the student of insect transformation. It is entitled "The Mouth-Parts of Some Beetle Larvæ (Dascillidæ and Scarabæidæ), with Especial Reference to the Maxillulæ and Hypopharynx," and is the joint production of George H. Carpenter, professor of zoology, and Miss Mabel MacDowell, research student, Royal College of Science, Dublin. It is in some degree a continuation of a paper published by Professor Carpenter in 1903, calling attention to the pair of jaws —maxillulæ—between the mandibles and the maxillæ, which, well-developed in many of the apterygota, are represented by vestiges in some of the more primitive exopterygote insects. These maxillulæ are always associated with the hypopharynx, an organ which has been almost entirely neglected by students of beetle larvæ. The result of the work described in the present paper has been to establish the presence of maxillulæ in the larvæ of Dascillus, presumably the first recognition of these appendages in any stage of an endopterygote (metabolic) insect. In addition to those of dascillus, larvæ of helodes, geotrupes, and phyllopertha were examined. In the larvæ of dascillus the hypopharynx lies between and somewhat behind the mandibles and dorsal to the labium. It consists of a flexible chitinous plate, supported and strengthened by lateral and terminal complicated sclerites. On its dorsal surface there occur two prominent lobed toothed sclerites, which from their position and similarity to the maxillulæ of helodes are no doubt true maxillulæ. In conclusion, the authors of the paper remark that the comparatively full development of the maxillulæ in the campodeiform dascillid larvæ and the reduction of them to minute vestiges in the cruciform scarabæid grubs are strongly suggestive of the primitive nature of the former type. In the second article of the present number Mr. Edwin S. Goodrich gives a long account of merilla antennata, a little worm found by him in one of the sea-water tanks of the Stazione Zoologica at Naples. He states that this creature belongs, not to the true polychæta, but to the archiannelida. It is the most polychæte-like of all the archiannelida and occupies a central position among the widely differing genera of that group; it therefore binds the archiannelida together, and at the same time to some extent bridges over the gap between them and the polychæta. In the third article Charles L. Boulenger, lecturer

on zoology in the University of Birmingham, describes a freshwater medusa from Rhodesia. This jelly-fish belongs to the remarkable genus limnocnida, of which the only known species, limnocnida tanganicæ, was discovered in Lake Tanganyika in 1883, and has since that time been met with in other parts of Africa, as well as perhaps in India. Boulenger's medusa was found in a river in Southern Rhodesia in 1908; it presents peculiarities by means of which it can be easily distinguished from limnocnida tanganicæ, and he proposes to describe it as a distinct species under the name of limnocnida rhodesiæ sp. n. The concluding article is by Geoffrey Smith and Edgar Schuster; in it are recorded a number of observations on the effects of the removal and transplantation of the gonad in the frog rana fusca. All the papers mentioned are accompanied by full-page plates of illustrations.

ERRATUM.—Our attention has been called to the fact that in our review of "The Doctors and the Insurance Act," by Mr. J. Dyer Bray, published in THE LANCET of June 1st (p. 1478), we gave the address of the publishers incorrectly. It should be as follows: Thomas Griffiths and Co., 65, Bridge-street, Deansgate, Manchester.

Reports and Analytical Records FROM THE LANCET LABORATORY.

DIGIPURATUM (KNOLL).

(KNOLL AND CO., 8, HARP-LANE, LONDON, E.C.)

Digipuratum is of decided therapeutical interest, since a consideration of its composition shows that for one thing the undesirable principles of the plant are eliminated, and for another the principles of known activity are retained. It is described as containing the active gluco-tannoids (glucosides) of digitalis diluted with sugar of milk, so that the physiological action of 1 gramme corresponds to 80 frog units. Its uniform therapeutic potency is said to be well maintained. The preparaton is physiologically standardised. The increasing employment of digitalis to support the mechanism of the heart renders this standardised preparation of value, and the success that has attended the separation of substances which in ordinary digitalis preparations cause in particular gastric disturbances adds to this value.

RIDGE'S DESICCATED MILK.

(RIDGE'S FOOD CO., ROYAL FOOD MILLS, BOLEYN-ROAD, LONDON, N.)

According to the results of our analysis this preparation is correctly described, for we found it to present the composition of whole milk reduced to a solid state by an improved process. Thus analysis gave the following results: Moisture, 1·50 per cent.; mineral matter, 6·50 per cent.; protein, 25·10 per cent.; fat, 27·00 per cent.; and milk sugar, 39·90 per cent. The powder formed with water an emulsion resembling milk, most of the constituents being practically soluble. The process of evaporation evidently leaves the albumins uncoagulated. The preparation is of merit though it does not stand alone.

NONAC PORT WINE.

(HATCH, MANSFIELD, AND CO., LIMITED, 47, PALL MALL, LONDON, S.W.)

The claim that this wine is free from acidity other than that naturally present in the grape is substantiated by our analysis. It is of medium alcoholic strength, the alcohol amounting to 20·52 per cent. by volume. The extractive matters amounted to 9·04 per cent., 8 per cent. consisting of grape sugar, 0·375 per cent. of tartaric acid, 0·29 per cent. of mineral matter, the balance being made up by small amounts of glycerine and tannin. The wine has been well matured and is of good colour. The volatile acidity reckoned as acetic acid was too small to be usefully estimated. The wine is a genuine Alto Douro growth with good port flavour, and, as ports go, is light in character.

NEPHRITIN.

(THE ANGLO-AMERICAN PHARMACEUTICAL CO., GALEN WORKS, 59, DINGWALL-ROAD, CROYDON.)

This organo-therapeutic preparation has been prepared in the laboratories of Messrs. Reed and Carnrick, of Jersey City, United States. Care has been taken to secure in the product only the vital substances or ferments of the cells of the kidney which may be an aid in treatment. It is stated that in macerating the kidney for the preparation of the extract the grains of segregation are alone employed, and the tablets submitted contain these grains associated with the important ferments of the kidney. Some literature is published on the subject which gives evidence of the value of this extract in nephritis under, of course, careful medical observation.

ZONE SALT.

(THOMAS KERFOOT AND CO., BARDSLEY VALE MILLS, BARDSLEY, LANCS.)

This is a clean, dry, white crystalline preparation containing a mixture of salts which render it of value in common cases where a laxative is indicated. According to our analysis, the salts present are sodium sulphate, sodium phosphate, potassium chloride, and lithium carbonate. The salt is quite agreeable to take, inasmuch as it forms an effervescing preparation without nauseating flavour. A consideration of the substances present indicates to the physician the useful applications of this preparation.

INDIA PALE ALE.

(MATTHEW BROWN AND CO., LIMITED, THE BREWERY, POLE-STREET, PRESTON.)

We have obtained no evidence in the analysis of this beer which was opposed to the statement that it is brewed from malt and hops only, "and is really the old time beer." It was in good sound condition, pleasantly bittered, and free from excess of carbonic acid gas, which, moreover, had the characters of the gas developed by the fermentation of the beer itself. Analysis gave the following results: alcohol by volume, 5·08 per cent.; malt extractives, 4·70 per cent.; mineral matter, 0·30 per cent.; volatile acidity reckoned as acetic acid, 0·024 per cent.; fixed acidity reckoned as lactic acid, 0·207 per cent. The extractives consisted mainly of maltose, 3·20 per cent., and dextrin 1·00 per cent. These results show the absurdity of the modern contention that a good palatable beer can only be brewed by employing malt substitutes and foreign bitters.

DONATIONS AND BEQUESTS.—The Chelsea Hospital for Women has received from the trustees of Smith's (Kensington Estate) Charity £250 for its Rebuilding Fund.—The late Mr. H. G. White, of Melksham, has bequeathed £10,000 to the Royal United Hospital, Bath; and £1000 each to the Bristol Royal Infirmary, Melksham Cottage Hospital, and the Cardiff Infirmary.—By the will of the late Mr. Thomas Gibson Glover the testator left £5000 to the Dumfries and Galloway Royal Infirmary, to endow four beds to be called "Tom Glover Beds."—The late Rev. Edward Hubbard Boardman has left by will, subject to one life interest, £5000 to the Norfolk and Norwich Hospital, and £1000 each to the Royal Hospital for Incurables, Putney, Home for Incurables at Clapham Rise, the Hospital for Sick Children, Great Ormond-street, the Convalescent Home at Eastbourne, and the Cancer Hospital, Brompton. Under the same will the Royal Sea Bathing Infirmary, Margate, the Sevenoaks Cottage Hospital, and the Royal Berks Hospital will receive £500 each.

New Inventions.

THE "SAINT GEORGE'S HOSPITAL HEART BED-REST."

ALTHOUGH this invaluable agent of relief has been in use at St. George's Hospital for some little time, its existence and its advantages are hardly known anywhere else, and many sufferers are denied the alleviation it might have offered them. This must be due to its not having been introduced to general notice.

The "St. George's heart bed-rest" is the invention and the free gift to the hospital of Sister A. E. M. Rowson, who has patented it in the exclusive interests of the hospital funds. It is obtainable from Messrs. J. and A. Carter, of New Cavendish-street, London, W., who have admirably carried out its construction. It has proved to be a great help and comfort for orthopnœa of all kinds, and for all conditions demanding an upright position. It is therefore likely to be in growing request in abdominal surgery, where the early post-operative treatment tends more and more to be conducted in that posture. The illustration gives its general structure at a glance, but its

benefits can only be fully gauged by the patient and by the physician and the nurse who witness his relief. 1. All heart-chairs or bed-rests support the patient by confining him; this appliance give him complete freedom from any check or pressure and a much greater choice of attitude—namely, through a range of 180° forwards—than even his pile of pillows can afford to him from behind. 2. Their usually horizontal ledge tends to bend him forwards at a considerable angle, whereas the wide horseshoe rest is everywhere on the slant, imitating the slope of the pillows behind him. 3. If the bed should be slanted for drainage there is no need to guard against his sliding. Even when moved down to the end of the slope to let the feet overhang he is always safely anchored by the comfortable grip of his elbows over the edge of the horseshoe. As a fact, with suitable pillows, the elbows are so natural a rest for the head, particularly in sleep, that the freely adjustable head support is most often discarded. Specially intended for the constant use it gets in the wards, the bed-rest has been devised on the "one solid piece" principle for utmost stability and duration, but it would perhaps lose none of its main advantages by being constructed in detachable sections, when it could be most easily packed and carried for use in private practice. The two powerful supporting hoops which bridge over the bed are made of the lightest bent wood. The total weight is below 29 lb., and only 27 lb. when the removeable head-piece is lifted off.

For dyspnœa in the dorsal decubitus, when the patient falls back upon his pillows, the horseshoe can be moved close up to him to receive his arms, thus combining with a complete relaxation and support of the spine from behind some of that respiratory relief and fulcrum which is afforded by the stretched arm position, and which otherwise can only be obtained in the position of forward inclination of the trunk.

WILLIAM EWART, M.D. Cantab., F.R.C.P. Lond.,
Consulting Physician to St. George's Hospital.

LITERARY INTELLIGENCE.—The Sanitary Publishing Company, Limited, announce for publication the third and revised edition of "Sanitary Law and Practice: a Handbook for Students of Public Health and Others," by Dr. W. Robertson and Dr. Charles Porter, barrister-at-law.—The Oxford University Press announces for publication a study by Dr. H. P. Cholmeley of John of Gaddesden, who was the first English Court physician, and of his chief work, known as the "Rosa Anglica." The "Rosa," written in 1314, was first printed in 1492, and is mentioned by Chaucer. John of Gaddesden was a graduate of Oxford in arts, medicine, and theology; he died in 1361, and is supposed to have been born about 1280.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.—A council meeting of this association was held at 34, Copthall-avenue, E.C., on May 30th. Mr. D. B. Balding was in the chair, and the President of the association, Surgeon-General G. J. H. Evatt, was also present. With regard to the appointment of district secretaries in different parts of the country, the honorary secretary reported that Dr. W. T. D. Allen, of Liverpool, had consented to act, and that Mr. S. Ellis, of Salisbury, had promised to do his best to recruit members in his district. The council resolved that a list of district secretaries should be drawn up and published in the *Poor-law Medical Officer* to improve the organisation of the association. A letter was read from Mr. Shirley Fussell reporting that the case of Dr. P. E. Todd and the Winchester guardians had been before the executive of the National Poor-law Officers' Association and was to be further considered at their next meeting in June. He desired to be informed of any further particulars. The honorary secretary said the British Medical Association had the matter still in hand. Mr. Shirley Fussell had sent also six copies of the report of his council on the recommendations of the Conjoint Conference of Poor-law Officers on the recent Report of the Royal Commission on the Poor-laws. It was pointed out that beyond condemning the medical recommendations of the Commissioners the council of the National Poor-law Officers' Association had passed over all the suggested reforms in the Poor-law Medical Service that had been recommended by the Conjoint Conference. After some discussion it was resolved that a letter be written to the secretary of the National Poor-law Officers' Association expressing regret that the recommendations of the conference had not been adopted in their report. A letter was read from a member asking for advice in the following circumstances. He had attended to two cases of compound fracture in Poor-law patients. Under Article 177 of the General Order, July, 1847, he was entitled to £5 for each of these cases if he had treated them throughout their whole course. But they had been taken out of his hands after being under his care for a week, and he had been offered by his guardians a fee of £1 in each case. Was he compelled to accept such payment? The council unanimously condemned this offer as being mean in the extreme. Article 177 specially ordered that half the fee should be paid in cases of operations coming under that Order where the patient had died within 36 hours. At least half the fee should be paid in such cases. It was resolved that the member be advised to ask the guardians to pay him half the regular fees, and in event of refusal to go to the Local Government Board. Failing satisfaction, the propriety of taking the case into the county court ought to be considered. It was not certain that the whole fee might not be claimed, as the cases had been taken out of the medical officer's hands. Letters were read from two other members complaining of attempts made by the guardians to include among their duties the attendance on school children found defective on examination with regard to the removal of adenoids, &c. In the case of one, however, it seemed likely that the guardians would pay extra for such treatment. It was resolved that all Poor-law medical officers be advised to resist in every way the imposition of such duties without special payment for the same. The council finally took into consideration the special arrangements for the Bristol meeting.

THE LANCET.

LONDON: SATURDAY, JUNE 8, 1912.

Hospital Sunday in London.

"THE KING and QUEEN will attend the 10.30 morning service at St. Paul's Cathedral on Hospital Sunday, June 9th," runs the announcement made officially in the newspapers, and the information must have been read with satisfaction by all who have at heart the prosperity of the Metropolitan Hospital Sunday Fund. They must have felt the confident hope that the example set by Their Majesties would be followed widely, and that loyal subjects throughout London, and in all places of worship where collections are made on behalf of the Fund, would support by their presence, by their recruiting enterprise, and by their purse a noble charitable effort. Example is proverbially better than precept, and King GEORGE and Queen MARY could have chosen no better method for reminding us unostentatiously but unmistakably of the goodwill which they, like those whose traditions they inherit, have always shown towards the work done in the hospitals, of their sympathy with the physical suffering of their humblest subjects, and of their knowledge of the practical financial difficulties which hamper and restrain the alleviation of that suffering. That the hospitals of London should have won Their Majesties' esteem and approbation is not to be wondered at. They are personally familiar with many of the wards for which the Metropolitan Hospital Sunday Fund makes its appeal. Their high position gives them no privilege of immunity from illness, and they share the indebtedness of their subjects to surgical and medical science. To recall prominent instances, they saw King EDWARD VII., on the eve of his coronation, laid on the bed of sickness and restored to health by an operation which would not have been possible in those earlier days of his life, when as PRINCE of WALES he lay at death's door through typhoid fever; while they know that on that momentous occasion it was, under divine providence, the prescience and assiduous care of physicians and nurses which enabled him to win through in a hand-to-hand battle with death. They have lived to see that dreaded disease combated by new methods which deprive it of half its terrors. King GEORGE and his spouse have recently returned from the great ceremony of the Durbar and from a triumphant progress across their Indian Empire, where even more conspicuously than at home scientific investigation is arresting and banishing or rendering comparatively innocuous scourges once looked upon as inexorable and almost invariably conquering enemies of human life. Their Majesties are fully appreciative of the progress of medical and surgical science, and of the fact that the hospitals of London, on whose behalf the Metropolitan Hospital Sunday Fund solicits the alms of the benevolent, perform a paramount share in training those who fight death and sickness throughout the empire.

It is not, however, on account of the debt that the public owe to the medical profession, or to the hospitals which afford to the members of that profession their priceless education, that the Metropolitan Hospital Sunday Fund holds its annual collection with the active concurrence of our KING and QUEEN, and with the hearty support and goodwill of their subjects. The hospitals of the metropolis are without rivals in the world as a system of charitable institutions. They are the free gift of those who have to those who have not, carrying on a magnificent work without State or municipal subvention, and on this great plea they take their stand. The donations of the living and the bequests of our forefathers have made these institutions what they are, but neither the quick nor the dead have enabled them to attain to financial independence or to approach within reasonable distance of so desirable a position. It is not, indeed, in the nature of their case that they should ever occupy it. An individual or an institution with carefully defined ambitions may limit expenditure in accordance with an estimate of a more or less assured income; and in regard to an individual, if he decide to practise economy, he can do so in most cases by denying benefits to himself. But a hospital can only curtail its outlay at the expense of the sick and suffering and by refusing to an increasing throng of applicants that which it exists to supply—namely, the best of medical service. For these institutions—to whose doors the inmates flock from the ever-growing County and City of London, to doors which are not closed, even to those that come from further afield—receive a crowd of patients which can never grow less in volume in existing circumstances, while it is not easy to contemplate conditions under which the supply of beds would ever exceed the demand that science, eugenics, and charity would alike consider proper. Further, it must be remembered that as the scope of the service of hospitals, especially of the in-patient service, grows larger, so does the expense of that service mount with our ever-spreading developments in the art of healing. The day draws no nearer when the demand can cease for fresh apparatus and equipment to carry out new measures for saving life and for restoring to health those who rightly claim in the hospitals the best help that science can give. To go forward must ever be the aim of these great temples of our knowledge, these great centres of our activity. It is essential to the existence of a hospital nowadays that it should be in the best sense of a current expression "up-to-date"; it would show a poor gratitude to the generous donors who support these institutions, and a miserable inappreciation of the hopes of those dead friends from whom the endowments are drawn, if the hospital were not provided with all that is modern for the use of the humble patients, discarding that which is obsolete and adding that which after due trial is found to yield solid results. The hospitals can make due return to the charitable for their benevolence in this way—by equipping with knowledge and skill nowhere else attainable those who devote the best hours of their lives to working on behalf of the poor in the wards of a hospital.

What the hospitals of London mean, and for generations have meant to the working poor of London, we need hardly dwell upon at length. Those for whom life is not a perpetual struggle, who can make provision against the onset of sickness or the misfortune of accident, whose wives and families have friends or relatives ready to assist them in time of stress,—those, though they may be far removed from higher circles of society, can but faintly realise what happens when from injury or disease the usually independent worker is thrown into enforced idleness or finds himself nearing the brink of an untimely grave. To him health means the power to keep himself alive by honourable toil and the chance to maintain those dependent upon him. The charity which the hospital affords him may be, and probably is, the only eleemosynary assistance that he has ever asked for or would ever accept. He can take it without shame because that which is thus placed within his reach is far beyond anything that any economy of his own could ever provide, consisting of medical or surgical aid, such as the urgency of his case demands, administered in those circumstances of nursing, housing, and nourishment without which such aid would be ineffective. Addressing (as on the present annual occasion we are wont to do) a public outside the usual circle of our medical readers, and urging the claims of the great medical charities of London to their generous support, we would ask them to make the present year 1912 memorable in the annals of the Metropolitan Hospital Sunday Fund by increasing the revenue of the Fund beyond any point to which it has hitherto attained. The occasion is one favourable to the making of a special effort. Last year the Coronation may have distracted attention from the cause of the hospitals. This year the London season is running its course upon lines which must mean great profits to many individuals and regular work to many operatives. The country is at peace with the world, despite the rumours of war, and the returns of British trade show advancing prosperity in the face of the grave unrest that is prevalent in industrial circles. It would be wilfully shutting our eyes to what is obvious if we ignored the causes for national anxiety, but there is nothing in our existing political and social situation which should act other than as a keen stimulant to generosity. In a period of unrest in the world of labour, such as now prevails, there is always a danger lest some should feel alarm and seek to avoid a purely voluntary expenditure from motives of economy. Others, again, in the same circumstances may be influenced almost unconsciously by a sense of irritation at the loss which strikes and threatened strikes impose upon commerce. We would ask them to remember that the need of the poor in their time of sickness and injury is ever the same. The poor cannot wait for medical or surgical aid until "times are better"; and the hospital cannot withdraw that aid at a moment's notice in anticipation of a diminished income.

Yet another cause which may tend to lessen the contributions of the benevolent on Hospital Sunday in the present year is the great calamity which is still fresh in the memories of us all. The unparalleled disaster to the *Titanic* roused the nation to an open-handed outpouring of charity on behalf of the bereaved relatives of those who perished. Of this generosity we may feel justly proud. We claim, however, on behalf of the hospitals that the support accorded annually to them through the medium of the Metropolitan Hospital Sunday Fund should not be diminished on that account. If any should be tempted to say to himself, "I have just given freely to help the widowed and orphaned; I cannot afford this year my usual contribution on Hospital Sunday," let him remember that to act thus would make not him but a hospital, which needs every penny it can get, a contributor to the *Titanic* fund. We should not, perhaps, have referred to this, trusting that public generosity and thought for others would suggest the argument we have used, if we were not credibly informed that in some quarters church offertories and other subscription lists have exhibited an appreciable falling off, attributed, not without apparent justice, to the cause suggested. The appeal of the hospitals to the public is ever a reiteration of that with which all ears are already familiar—it is a demand which has little novelty upon which those who make it may rely, and it is therefore at a disadvantage in competing for popular attention with special funds started to meet emergencies. One circumstance or another may always tend to lessen the support accorded, and to cause anxiety to those who realise the difficulty with which the yearly income is made to meet the yearly necessary expenditure.

We are within a month or two of the coming into force of a National Insurance Act which may some day exercise a potent effect in safeguarding the national health. Without discussing here the many causes which gravely threaten the smoothness of the working of the machinery of this vast experimental measure, we would point out that it would be little short of a national misfortune if the anticipation of coming taxation, imposed with a view to secure medical treatment for the working classes such as the Act proposes to provide, should cripple the hospitals of London by diminishing the gifts of their former generous supporters. Whatever benefits the Insurance Act may secure for the poor in the future, it will not abolish their need for treatment in hospitals; it will not alter the fact that only such aid as the hospitals afford will avail them in many circumstances; it cannot change the position of the hospital as the agency which restores the worker to health, which sends back the mother to her husband and her children, and restores the child to his parents when no other method under our existing social scheme could work these miracles. We urge upon all to follow the example set them by their KING and QUEEN who will attend divine service in the Cathedral of the metropolis of their empire on Hospital Sunday, and of the Lord Mayor of London, who, with His Majesty's judges, will be present at the afternoon service on the same day. The tendency of modern life in London, what is known as the "week-end habit," and the popularity of various forms of amusement have diminished the congregations of many places of worship during recent years. We desire to enter upon no controversial topic, but we do entreat those who, in the pursuit of health and pleasure, are absent on

Hospital Sunday from London not to forget the claims of the Metropolitan Hospital Sunday Fund. We also make the suggestion that if any would feel the blessing of exercising self-denial in a worthy cause the opportunity is present for their acceptance. The week-end expedition to the country or the seaside, the long motor ride, and the game of golf are not uncostly pleasures. To forego an act of self-indulgence and to place the money saved in the collecting-bag, perhaps to double or treble it after reflection upon the goodness of the cause of the Metropolitan Hospital Sunday Fund, would be a practical act of unselfish consideration for others.

The Medical Factor in the Italo-Turkish War.

THE Army Medical Department is scoring a distinct success in the otherwise unresplendent operations of the Italian forces in North Africa. To the credit of that department, be it recorded, that scarcely had the invading army disembarked when not only were ambulances, thoroughly equipped and manned, established at the line of combat for the care and cure of the wounded, but an equally well-appointed service was set on foot in the interests of the native tribes, decimated as these are by septic disease affecting mainly the organs of special sense and the aural and naso-laryngeal passages. At Tripoli, to begin with, in an unfrequented street, there is the Ambulatorio Baccelli, so-called after the Nestor of Italian medicine, open every morning at 9, when its doors are thronged by a crowd of Arabs eagerly expectant of relief or cure. The institution is divided into four branches, set apart for the special treatment of indigenous maladies, of which syphilis and ophthalmia are the chief. The prevalence of syphilitic infection, which has never been subjected to skilled treatment and is as often congenital as acquired, is appalling. Ophthalmia is almost universal among the natives, even the upper classes suffering severely from it, oftener than not accompanied by complications, mainly in the nose and pharynx. In the Tripolitania, blindness is the fate of 1 per cent. of the inhabitants, and syphilis numbers nine-tenths of them among its victims. The Ambulatorio Baccelli, divided, as stated, into four branches, meets this appalling state of things, first by its "general surgery" branch, which includes obstetrics and gynæcology, under the direction of Dr. BEVACQUA; secondly, by its "general medicine" branch, under the eye of Dr. SCALESE; thirdly, by its "ophthalmic" branch, directed by Dr. EZIO MARRI and Dr. NOLA; fourthly, and finally, by its "otorhinolaryngeal" branch, under the control of Dr. TONIETTI of Turin. Each branch has its register of patients, from which details of other than medical interest may be drawn. The first applicants for relief were the Jews, less distrustful than the Arabs, and therefore profiting earlier by the gratuitous treatment which has already wrought marvels on countenances horribly disfigured, in which the eyesight was often well-nigh extinguished. These object-lessons in European therapeutics gradually attracted the Arabs, who began to throng the previously unfrequented street and its Ambulatorio Baccelli, their numbers increasing, as day by day there returned to his friends a tribesman whose "bad eye" was restored to something like health and efficiency, the pain relieved by the appropriate collyria, and the whole system feeling the better for the treatment.

Eloquent indeed are the statistics of two months' treatment in the Ambulatorio. The otorhinolaryngeal branch had in that period 444 new patients, with a total of 1423 visits; while the registers numbered many operations, tracheotomy for example, extirpation of tumours, and removal of polypi. In the "general medical" branch more than 1500 cases were under treatment at the date of the last report, the ophthalmic branch recording an average of 100 visits daily and the surgical an average of 40. The number of eager applicants amount to a veritable "crowd," impressed as they are by the resources of the pharmacy or drug store superintended by Dr. CREMISINI and its continuous dispensing of gratuitous medicaments. Nay, as Dr. ORAZIO PEDRAZZI, of the Subalpine School, in an able report points out, the Ambulatorio has a political importance not to be despised, the previously jealous, not to say hostile, natives coming to look on the invading Italians as genuine benefactors whose presence among them means moral as well as physical rehabilitation. "Who," asks Dr. PEDRAZZI, "would ever have expected that the jealous Arab women who, if met on the street, would hide their faces behind shawls or veils, would have dared to expose their breasts to the Italian physicians to get cured of some skin affection?" Indeed, the "invisible girls," who from childhood are mewed up in their apartments to avoid the public gaze, are brought by their mothers to the Ambulatorio, and while they hesitate to uncover themselves they are reassured by the maternal voice and assisted by the maternal hand, with the words, "Il medico è figlio di Allah! Gli occhi del medico non ricordano!" ("The doctor is a son of Allah; the doctor's eyes don't remember!"). Then the girls let their shawls drop and expose themselves, a little coyly, to the profane onlooker, and when the diagnosis and the treatment are over their mothers address them: "Che Allah ti dia la salute dell' anima come tu ci dai quella del corpo" ("May Allah give you health of soul as you give us health of body"). Truly a noble result of medical effort. Medicine knows no politics, and whichever side political right may be in the struggle in North Africa science cannot but rejoice in the good work being done by Italy, representing here European civilisation and progress.

Medical Education and Practice and Home Rule.

THE Presidential Address of Sir DONALD MACALISTER to the General Medical Council, whose summer meeting began on Tuesday last, is published in another column, and does not foreshadow a lengthy sitting. Indeed, the meeting may have dissolved before many of our readers receive this paper. This is well, for, as we all know, the financial resources of the Council are strictly limited, and every economy which the officials may strive to make is easily brought to no effect by an undue prolongation of the sitting. A highly important,

though brief, debate has ensued in the Council upon the possible position of medicine, if and when the new Bill for the Government of Ireland becomes law. It is absolutely essential that such matters as medical education, medical registration, and the supervision of the British Pharmacopœia should be reserved as specific matters to be dealt with by Imperial Parliament. We do not for a moment suggest that any new Irish legislation would endeavour to set up a different system of medical registration for Ireland, or to fix a degraded standard either of examination or of education, but, as Sir CHARLES BALL pointed out to the Council, it would be extremely undesirable that any separation of the laws affecting these matters should take place between Ireland and England and Scotland. Sir DONALD MACALISTER supported Sir CHARLES BALL'S words by pointing out that if the Government of Ireland Bill passed without any protective amendment on the matter, it would be possible for the Irish legislature to produce a medical enactment providing that no one should practise medicine in Ireland who had not passed the requisite examination in Ireland. The feeling of the Council was well expressed by the unanimous passage of a resolution affirming that in the public interest and welfare a uniform standard of medical and dental education and registration should be maintained in Great Britain and Ireland. The resolution further provided that steps should be taken to procure the insertion in the Government of Ireland Bill now before Parliament provisions reserving to the Imperial Parliament the control of legislation relating to the Medical and Dentist Acts. With this attitude of the General Medical Council all our readers will agree.

Annotations.

"Ne quid nimis."

SEXUAL INSTRUCTION FOR CHILDREN.

THE Instruction of the Young in Sexual Hygiene formed the subject of an interesting communication by Dr. Eric Pritchard at the Conference of the Child-Study Society, held in the University of London recently. Dr. Pritchard points out that he used the term "sexual hygiene" as including "those many aspects of the sex question which have for their common objective the scientific teaching of morality." It is no longer a matter of debate, he says, whether children shall receive instruction on this subject; the question is who is to teach them—how, when, and where. It is regarded as a postulate that children shall be told the truth, not necessarily the whole truth, but truth sufficient for their present needs and coördinated to their powers of understanding. Apart altogether from the undoubted fact that if such knowledge is not properly imparted to children by proper persons it will inevitably be improperly thrust upon them from polluted sources, comes now the comprehension that, thanks to the findings and operations of psycho-analysis, we now know that the sexual life of children is much wider and richer than it was formerly supposed to be, and that their relationships with others, their aversions, hatreds, joys and fears are often swayed by that prime mover of our psychological activities, the sexual instinct. It is not necessary to accept unhesitatingly all the extreme doctrines that have been advanced to accept this fundamental general principle. Dr. Pritchard does not agree with those who consider that every child should receive its first lesson in sexual knowledge from the mother, because mothers are for the most part absolutely incompetent to convey this knowledge in a beneficial manner; and, moreover, such a course in any case could be applicable only in the case of the relatively small cultured classes, and could not apply to the great masses who have neither the understanding nor the education. He has no great opinion of amateur work where professionals or experts can be provided; if children are to be taught such truths it should be in the most skilful way and by the most competent teachers. The real obstacle in teaching the children the elements of sexual hygiene he considers to be the difficulty of effacing from our minds our own shame-faced conceptions of these fundamental physiological truths consequent on our inability to forget the impure sources of our own information. He suggests, therefore, the formation of societies for debate and discussion of these matters between parents and teachers, in whose syllabus of instruction lectures on sexual hygiene should be included, and that the easy task should first be essayed of instructing young adolescents. Then as a knowledge of technical difficulties was gained and greater skill in the practical teaching of details was acquired younger and younger classes of children should in turn be undertaken, leaving "as little as possible to the parents, who have already given abundant proofs of their willingness to shirk this responsibility" and relying on expert knowledge and teaching. There is much sound wisdom and expediency in Dr. Pritchard's counsels.

A PLEA FOR THE WORD "MOCK."

WHEN things are not what they seem, what more suitable word could be applied to them than "mock"? Prejudice need not be excited by the word, for "mock-turtle" soup, which everybody knows is not turtle soup, but a soup prepared from calf's head in imitation of turtle soup, is very popular. Modern times are full of mock things, but these things are described in a way which tries to convey, frequently with considerable success, that they are not "mock." In this connexion there is much in favour of the word being adapted and adopted. It is plain, simple, and unmistakeable, and freer from prejudice than are so many other words. How much better, for example, would "mock-butter" be than "margarine" as a descriptive and discriminative term for that substance, and why should mock-butter be a more disparaging title than mock-turtle? As a matter of fact, mock preparations can be mentioned which are dietetically as good as the real preparation, if, indeed, in many instances they are not better; but let there be no deception about the matter. Mock-turtle is probably more nourishing than real turtle soup, and the various margarines show no dietetic inferiority to butter. Flavour is, of course, of importance, but as a rule the price for flavour is out of all proportion to the intrinsic value of the food. If the word "mock" does not detract from the merits of mock-turtle why should its attachment discount the value or reputation of other articles of food or of drink or clothing. We have already suggested mock-butter for margarine, and the idea can obviously be extended. Mock-brandy could, for example, be applied to brandy that is not a product of the grape or of a particular province; mock-sardine to a fish that is not, strictly speaking, a sardine; mock-champagne to a wine which, though perfectly wholesome and a genuine wine, is not a product of the celebrated Champagne district; mock-whisky to a spirit which is not an all-malt distillation; mock-port to a wine which is not produced in Portugal, though it may be a genuine wine and prepared in the same way; mock-flannel to a fabric which is not flannel (a much more straightforward name than flannelette). If the whole

traffic of substitution is based on mimicry, and there can be no doubt of it, the adoption of the word "mock" forming a compound with the genuine word would give the public exactly the information wanted, and it is quite probable that the compound term would in time carry little or no prejudice with it. The question of definition, one of the most pressing questions of the day, would without doubt be considerably narrowed if it were decided to insist upon all substitutions being qualified by the word "mock."

MAY AT HOME AND ABROAD.

AFTER a month of exceptional drought it was expected that May would do much to make good the shortage of rainfall, especially as it began its career when the weather appeared to have fallen into an unsettled state. These anticipations were, however, too optimistic, for events proved that the return to normal weather conditions was merely temporary. Except in the western and northern parts of the kingdom the drought was not effectually broken until after the 20th; and it was not until the 30th that any copious fall of rain cleansed the atmosphere and stimulated the parched vegetation into a more active, healthy growth in the southern and south-eastern counties of England. There were, nevertheless, several days with only two or three hours' sunshine and a few with less than half an hour, while in some localities there was an occasional day entirely sunless. Over the kingdom generally the total number of hours of sunshine differed little from the normal for May. In the metropolitan area the City and Westminster caught a mean of about 5 hours and 20 minutes per day, while at the Kew Observatory the daily mean was little more than 5½ hours. At Hampstead and Greenwich, however, there was a mean of rather more than 6 hours per day. These figures are much lower than those of the abnormally bright May of 1909. As a rule the temperature was a few degrees above the average over the United Kingdom, but there were occasional periods of a few days when it was below it, although at no time was the weather so cold as it sometimes is in a wintry relapse during May. Frosts were seldom experienced, even on the grass, and were, with one or two exceptions in the midlands and north, not very severe, and the tender spring vegetation suffered little injury. In the metropolis and its immediate vicinity the shaded thermometer ascended to 70° or above on several days. At Westminster that point was reached or exceeded on six afternoons, at Kew on five, and at Hampstead on four. At Greenwich it touched 83° on the 11th, and rose to 70° or higher on 12 other days. The mean temperature of the nights was about 3° to 4° above the May normal. Westminster was warmer than the more outlying districts, its mean minimum temperature being 49°, or rather more than a degree above that at Kew and Hampstead, and about 2° above that at Greenwich. The coldest nights occurred on the 25th and 26th, when minimum readings below 40° were recorded, except at Westminster and Hampstead. On the Continent the general condition was not nearly so droughty as in England. Some districts in southern and south-eastern France experienced severe thunderstorms and flooding rains towards the end of the month, and at Paris there were not many consecutive days without a more or less copious fall which gave a total for the month of 2·1 inches, or about twice as much as in London. At Biarritz the total was 2·4 inches, but the greater part of the month was rainless, and at Nice, where most of the month was also dry, the total was only 1·3 inches. Paris was considerably warmer than any part of this country during the daytime, its mean maximum temperature being 68°—three degrees higher than in London. At night, however, it was relatively cold, its mean minimum temperature being 48°, a degree lower than that at Westminster. Biarritz enjoyed a more equable temperature. While its mean maximum was as high as 70° its mean minimum was no lower than 55°, and at Nice also the difference between the heat of the day and night was comparatively slight, the mean maximum being 67° and the mean minimum 52°. An unusually high temperature for the time of year was experienced over the greater part of France over the 11th and 12th. At Paris on the 11th the shaded thermometer reached the high figure of 90°, and at Biarritz it rose to 97° on the 11th and to 91° on the following day. As in this country, the sunshine at Paris was not a particularly marked feature of the month; its mean daily figure was the same as at Greenwich and Hampstead—rather more than six hours. In Italy and the Mediterranean islands the month was generally fine and the temperature about equal to that of an average June in England. Italy experienced some heavy rains on the 22nd and some substantial falls subsequently, but the earlier portion of the month was practically rainless and mostly very bright. In Switzerland the weather was never very hot, and as a rule sunshine and showers alternated with becoming regularity. Neither Germany nor Austria was so droughty as the greater part of England, and both regions experienced considerable fluctuations in temperature, sometimes being very warm for the time of year and occasionally rather cold.

COMPLETE HEART-BLOCK WITH NORMAL BUNDLE OF HIS.

HEART-BLOCK is usually due to disease of the auriculo-ventricular bundle blocking the passage of the contraction wave from the auricles to the ventricles. In the *American Journal of the Medical Sciences* for May Professor William Pepper and Dr. J. Harold Austin have reported the following case in which the bundle was normal. A cabinet-maker, aged 39 years, was admitted into the University of Pennsylvania Hospital on Feb. 5th, 1910, with complete heart-block. In 1894 he contracted syphilis, and in 1907 he suffered from attacks of epigastric pain. In 1909 he had severe pains and syncopal attacks. On Feb. 8th, 1910, the heart-block persisted, but in the evening it was incomplete, the rhythm being 3 to 1. On the 9th the rhythm was 2 to 1, and on the 10th this rhythm alternated with a normal one. On the 24th he was discharged without having had a single syncopal attack in the hospital. He resumed work in May, but had to abandon it in October in consequence of syncopal attacks. On Dec. 5th he was readmitted. In the waiting-room he stood up to greet Professor Pepper, suddenly grew pale, put his hand over his heart, fell over a bench, was seized with general convulsions, and became unconscious. The breathing at first was stertorous, then shallow. In about a minute the radial pulse, which had disappeared, returned, colour came back to the face, and he regained consciousness. In a few minutes he could walk up to the ward. The pulse was 44, and soon fell to between 24 and 36. Tracings showed complete heart-block. Other syncopal attacks followed and he died in one on Feb. 1st, 1911. At the necropsy the heart was found distended with fluid blood. The valves were normal, and the only macroscopic change in the heart, which weighed 420 grammes, was dilatation. Sections showed that the ventricular muscle fibres were well developed. The nuclei stained normally and the striations were distinct. Throughout the sections there was moderately diffuse fibrosis which around some of the vessels was marked. There was thickening of the adventitia of the arteries. Stained sections were made of the sino-auricular bundle of Keith-Flack. They showed well-developed muscular fibres. The bundle of His was examined by serial longitudinal sections

stained with hæmatoxylin and eosin and with Mallory's connective tissue stain. The course of the bundle was followed from Tawara's node to just beyond its bifurcation. The muscle fibres were slender and separated by little interstitial tissue. The nuclei stained well and the cytoplasm showed distinct striation. The case presented several remarkable features. One of the syncopal attacks lasted eight minutes, during the last four of which the auricles appeared to stop beating as well as the ventricles. Apparently the man was dead, but he was restored by artificial respiration. The fingers were clubbed, although there was neither valvular disease of the heart nor pulmonary disease. Six cases have previously been reported of heart-block without any lesion of the bundle of His or only such slight alteration as occurs in many hearts without heart-block. In one case there was extensive fibrous mediastinitis which involved the vagi; in another both vagi showed evidence of extensive degenerative neuritis and the cardiac attacks were regarded as of vagal origin.

THE ESTIMATION OF NICOTINE IN TOBACCO.

UNDER the above heading in an article in the *Pharmaceutical Journal and Pharmacist* of June 1st the authors, E. F. Harrison, B.Sc., F.I.C., and F. A. W. Self, B.Sc., F.I.C., refer to the iodometric method of estimating nicotine in tobacco described in THE LANCET of April 6th last, p. 944, in an article entitled "The Toxic Factor in Tobacco." They acknowledge the value of employing iodine for the separation of nicotine from ammonia, but only as an indirect method. They revert to the classic method of passing a current of steam over the tobacco to which slaked lime has been added. The distillate is received into a known excess of standard acid, and the amount of acid neutralised by the nicotine and ammonia is determined in the usual way. Next, the distillate is made decidedly acid and the liquid evaporated to small bulk. The nicotine in this is precipitated by an excess of iodine and the liquid filtered. The clear solution is then treated with excess of thiosulphate to destroy free iodine, caustic soda is added, and the mixture distilled. The alkalinity found in this second distillate is deducted from that found in the first distillate, the difference being due to nicotine. One good point in this process is that any loss of nicotine occurring during the evaporation of a solution of its salts is of no consequence, because the total alkalinity (i.e., nicotine plus ammonia) is first determined, and therefore, though nicotine may be lost, the ammonia would certainly remain. The disadvantages of the method are, however, serious. When tobacco is treated with slaked lime free potash is generated, and distillation with alkali so liberated is invariably attended with loss of alkaloid. This is why distillation has now been generally superseded by methods involving extraction with some suitable solvent.[1] This process of distillation, further, is very tedious. The authors give some useful criticism of the iodometric method which we described, but it turns mostly on the question whether the conditions of the experiments were the same throughout, in regard to the amounts of acid present and of iodine added, and so forth. The first experiment we made was a control, a known amount of nicotine being added to a mixture of sawdust, ammonium chloride, and oil. The results were accurate and the succeeding experiments with tobacco were carried out under identical conditions, so that it was concluded that the amounts of nicotine recorded were not far from the truth. The authors rightly point out that the precipitate obtained by adding iodine to nicotine is to some extent soluble in water and that therefore there must be loss of alkaloid when the precipitate is washed. The loss is almost negligible, since the ratio of iodine to nicotine in the compound is 1016 to 162. This means that 50 c.c. of N/10 thiosulphate solution would be required to decolourise the nicotine iodine derived from, say, 5 grammes of tobacco containing 2 per cent. nicotine, and so the loss sustained by washing the iodine precipitate amounts to only a few drops of the thiosulphate. But if the solubility of the iodine compound is a serious matter it applies also to the scheme of Mr. Harrison and Mr. Self, when, as they direct, the filtrate from iodine treatment is distilled with caustic soda.

[1] "Since this method, by distillation, is always attended with a quite notable loss of the alkaloid, it is not as well adapted for the detection of very minute quantities of the poison as the method (extraction) before considered." "Micro-Chemistry of Poisons," by T. G. Wormley, second edition, p. 453. "A variety of methods has been devised for the estimation of nicotine in tobacco, insecticides, and similar preparations. The majority of the earlier ones employed distillation of the nicotine to separate the alkaloid, but have now been superseded by methods involving extraction with some suitable solvent." Allen's "Commercial Organic Analyses," vol. vi., latest edition, 1912, p. 240. And on p. 252 in the same volume the following sentence occurs: "He (R. Kissling) considers Vohl's conclusion as to the non-existence of nicotine in tobacco-smoke to be due to that chemist having overlooked the fact that the alkaloid is decomposed by warm potassium hydroxide, a reaction which, if a fact, has certainly not met with general recognition."

A CASE OF DOUBLE PERSONALITY.

AT a recent quarterly meeting of the Medico-Psychological Association Dr. Bernard Hart, lecturer in psychiatry, University College Hospital Medical School, and assistant medical officer, Long Grove Asylum, read a paper on a case of double personality, which has since been published in the *Journal of Mental Science*. The patient was a young man, aged 28, who had been admitted to the asylum on a certificate stating that he had been sending threatening telegrams to various people, and that he had been behaving in a somewhat irresponsible manner. It was soon found on examination that the episode of the telegrams constituted a small section of his past life, spread over several weeks, the contents of which were entirely forgotten. Moreover, it was found that similar totally forgotten periods had occurred at intervals during the preceding few years. Such a history suggested the existence of the ordinary hysterical amnesia or "fugue," so well described by Janet and others, and this diagnosis was readily confirmed by the method of hypnosis, under which procedure the forgotten memories were recovered without difficulty. Up to this point the case presented interesting enough, but by no means unusual, features. In the course of further examination by the method of psycho-analysis, however, adopted with the view of endeavouring to find out the underlying motives for the occurrence of the "fugues," new phenomena made their appearance. Acting on the supposition that the elements in question lay at a deeper level than the memories recovered by hypnosis, Dr. Hart proceeded to investigate the case along Freudian lines in the search for repressed incidents, intrinsically unpleasant, to the resuscitation of which the patient offered strenuous resistance. It happened that the patient was visited one day by an uncle whom he professed greatly to dislike, and after the visit was over Dr. Hart was questioning him concerning the causes of his aversion to his uncle, when suddenly the patient's demeanour began to change; up to that time always very courteous, he burst into a rage, and denied stoutly having seen Dr. Hart more than once before, although they had had some 20 prolonged interviews already. When certain incidents of his past life, formerly elicited from him, were mentioned, the patient declared the examiner must be mad, and suggested a bicycle ride to cool the latter's heated and confused brain. A few seconds later, however, the patient suddenly sat down, complained of headache, and almost immediately returned to his usual condition, with a complete amnesia for everything that had occurred since the visit of his uncle.

Thus there had momentarily appeared a "new" personality, and it soon became clear that he could be made to come on the scene by simply questioning the patient concerning his aversion to his uncle. This personality always appeared whenever a "sore spot" was touched—i.e., whenever there was a danger of one of the buried memories being brought to the surface. During the course of the investigation this "new" or "secondary" personality always remained suspicious and hostile to Dr. Hart, frequently abusing him with vigour and directness, whereas the ordinary personality of the patient was always grieved and distressed when told of what had occurred when he was in the other state. According to Dr. Hart, the birth of the "new" personality was a kind of psychological artefact, the result of the refusal of the patient to allow certain hidden memories to be revealed. The resistance offered seemed to have been crystallised, as Dr. Hart says, into a concrete form: the secondary personality was the incarnation of this opposition. Throughout the analysis he betrayed an intense animosity to the examiner, often making examination impossible, and it was only by the exercise of considerable circumspection on the part of the latter that any progress could be made. Finally, however, the secondary personality disappeared as all the repressed memories were brought to light, and since then the patient has been in a normal condition. It will be observed, from this brief abstract of an excellently worked out case, that Dr. Hart is at pains to dissociate the genesis of the second personality from the events of the amnesias or fugues, and to attach it solely to the incidents underlying the aversion to the uncle and the psycho-analysis concerned with these. In this respect the case differs from several that have already been recorded, for in a number of these the reduplication of the personality was undoubtedly associated with and appeared during a hysterical fugue. Instances of psycho-analysis have been published in hysterical cases where the concentrated resistance was as marked as in this case, yet it did not amount to the constitution of a secondary personality; and in this instance it may be questioned whether there may not really be a link between the hysterical phenomena and the psychical dissociation ("the four-fifths man" and "the one-fifth man," to use Dr. Hart's expressions), or rather whether each may not have had its basis in one and the same inherent psychical defect. It is to be hoped that Dr. Hart will take some opportunity of recording the psycho-analysis of this case in detail, for it cannot fail to be instructive.

TUBERCULOUS DISEASE OF THE EYE AND ITS TREATMENT BY TUBERCULIN.

THE view generally taken of tuberculosis of the eye is grave, and in some forms, as, for example, in cases of massive tubercle of the choroid, the advice is given to enucleate the eye. This view is combated by Mr. T. Harrison Butler in a recent paper[1] on Tubercular Disease of the Uvea. He finds that about 1 per cent. of all cases of disease of this region are due to tuberculosis, either in the form of local infection or of a toxæmia. Thus, many cases of disseminated choroiditis, usually attributed to syphilis, are probably tuberculous in nature, and the same is true of some instances of interstitial keratitis and of many cases of iritis in which no definite cause can be discovered and which are commonly called "rheumatic." Treatment of tuberculous disease of the eye with tuberculin is followed by excellent results. A preliminary injection of old tuberculin is given to establish the diagnosis, the patient being kept in bed and his temperature taken every four hours. The dose for this purpose is 0·001 c.c. of old tuberculin, this dose being twice doubled at intervals of a week if no reaction occurs. In one case a reaction was produced by bovine old tuberculin when the human preparation had failed. The occurrence of a reaction seems to increase the efficacy of the subsequent doses of new tuberculin. Treatment may begin with a dose of 1/2000 mgr. of new tuberculin, and this is repeated at intervals of a week, the amount being increased after a month has elapsed to 1/1000 mgr., and after a second month to 1/500 mgr. if no reaction is produced. Should such occur the dose is diminished. During this course of treatment the patient is not confined to bed, but is treated as an out-patient, his temperature being taken on the morning after each injection by a district nurse. The usual hygienic measures are carried out, along with the administration of cod-liver oil and iodide of iron. Incidentally Mr. Butler records a very unfavourable experience of the use of Calmette's ophthalmic reaction for diagnosis. In one case interstitial keratitis developed, in another a central corneal ulcer, while in several instances typical phlyctenulæ appeared.

[1] The Birmingham Medical Review, May 15th, 1912, p. 216.

THE FEEDING OF BREAST-FED INFANTS.

THE April and May issues of the *Jahrbuch für Kinderheilkunde* contain an article by Professor Hans Riethschel, of Dresden, upon the feeding of breast-fed babies during the early weeks of life. Riethschel explains clearly at the outset of his paper that he is dealing with the children of one category only—namely, the children of primiparous women where there is weakness or difficulty in suckling or a hypogalactorrhœa on the part of the mother. The intervals between the feeding-times for infants have gradually been increased in both Austria and Germany, pædiatricians in those countries having shown that children thrive much better upon five meals per day than upon the eight or ten which were usual in those countries and are still most frequently prescribed in England. This does not mean that the children get absolutely less food, for Czerny found that in the average case the total amount of milk taken in the day was fully as great as in the case of the more frequent meals, only that the child took rather more at a meal. In those countries five meals a day for infants is now the rule in institutional as well as in private practice. Riethschel points out what an immense gain the curtailment of the number of meals has proved to German pædiatrics, but in his clinic at Dresden he found a certain number of first babies, belonging to the above category, who did not thrive in the early days of life. On raising the number of meals from five to eight the children improved in practically every case, although in varying degrees. The improvement was presumably caused by the fact that there was a great increase in the quantity of milk consumed. The amounts were measured in all cases (by means of weighing before and after feeding) and the total for the day recorded. It seems that the more frequent stimulus hastened the full development of the secretion, or the child, if weak, was able to withdraw rather more nourishment. In most cases it was possible to feed the children less frequently, and subsequently they were found to thrive on the usual five meals per day. The babies under observation were all under the age of two months at the time when the observations ceased, most of them being younger. Riethschel gives 73 cases with full details and many charts. The data certainly seem to prove his thesis. Thus in one case the child was aged 14 days, and was under observation for 28 days. In the first 6 days the average milk taken was 537 grammes per day, and the gain was 7 grammes; in the next 8 days the average taken was 825 grammes, and the gain 40 grammes; in the next 8 days the average was 780 grammes, and the gain 26 grammes; and in the next 6 days the average was 1082 grammes, and the gain 48 grammes. In the first and third periods five meals in the day were

given, and in the second and fourth periods eight meals. It may be noted that the gain during the second period of five meals was much greater than in the first, doubtless owing to an improvement in the condition for which Rietschel was treating the child. He considers that the statistics which have been published from German lying-in hospitals (where doubtless the great majority are primiparous women) as to the day upon which the infant regains its birth-weight would have been more favourable had due allowance been made for these cases and more meals been given in the early days. At the end of the paper, which is most interesting and carefully worked out, the moral is pointed that each case should be treated upon its own merits: that whereas most children will do better upon five meals than upon eight, there are some who will do better upon eight than upon five, at any rate in the early weeks of life. It is pointed out that it is a curious fact that the French people, "who are certainly well acquainted with the physiology and pathology of the infant, still adhere to the rule of the frequent feeding in the early days of life." England still lags with France in this connexion.

THE LABELLING OF DISINFECTANTS IN AUSTRALIA.

IN the matter of the fixation of standards for foods and drugs the mother country has much to learn from her Australasian colonies, for although the laws relating to adulteration and misbranding which have been promulgated in Victoria, New South Wales, and other States are largely based upon our own Sale of Food and Drugs Acts and Merchandise Marks Acts, the Australians, with the zeal that marks their people, have gone forward where we hesitated. The most recent advances in connexion with the standardisation of drugs are those made by the Foods Standards Committee of Victoria, which has drafted a number of new standards which are now awaiting the approval of the Board of Public Health. Disinfectants, antiseptics, and deodorants are respectively defined, and the draft regulations provide that these products, when offered for sale, shall be labelled in such a way as to give the purchaser a fair idea of their value. A "disinfectant" or "germicide" is defined as "any substance which when used in accordance with the directions on any label accompanying it will kill the germs or spores of germs that cause disease in man or in the domestic animals." The draft regulations provide that the principal label attached to every package of disinfectant or germicide shall set forth: (1) precisely how it is to be prepared and used for general disinfection and for disinfecting fæces, urinal, sputum, bedding, clothing, and every other article that may be specified on the label; (2) the minimum amount which when mixed with a specified quantity of distilled water containing 3 per cent. by weight of common salt will, within five minutes, destroy a 24 hours old broth subculture of typhoid fever germs; (3) the minimum amount to be mixed with a specified quantity of distilled water and the period of time during which the mixture must be allowed to act in order to destroy the spores of anthrax; (4) whether the germicidal efficiency of the disinfectant is impaired by contact with acids or alkalies, or with albuminous or greasy substances; (5) any matter, or condition, or circumstance in the presence of which the germicidal effect of the disinfectant is counteracted or rendered inoperative, or is interfered with. It is further provided that the word "disinfectant" and the word "germicide" must not appear on any label accompanying any substance which is not a disinfectant or germicide within the meaning of the regulations. An "antiseptic" is defined as "any substance or compound which, when used in accordance with directions on any label accompanying it, will arrest the development of germs and prevent the decomposition of animal and vegetable substances." The draft regulations provide that there shall be written on the principal label attached to every package of an antiseptic offered for sale explicit information and direction as to (1) the strength and the manner in which it must be used in order that it may act as an antiseptic; (2) any matter or condition or circumstance in the presence of which the antiseptic effect is counteracted or rendered inoperative or is interfered with. When the regulations are adopted it will be an offence to label with the word "antiseptic" any substance that is not an antiseptic within the meaning of the regulations, so that many of the so-called "antiseptic throat lozenges," "antiseptic" toilet articles, &c., at present on the home market, will have to be re-dressed for consumption in Victoria. A "deodorant," which is defined as "any substance which, when used in accordance with directions on any label accompanying it, will prevent or neutralise offensive odours," must be labelled with the words, "This substance is not to be used as a disinfectant or germicide." Some of the products which are boldly sold in England as disinfectants will therefore only be eligible for sale in Victoria as deodorants.

THE PATHOLOGY OF TRICHINOSIS.

AN interesting paper dealing with certain aspects of the pathology of trichinosis is published in the *Annales de l'Institut Pasteur* of May 25th by M. Romanovitch. He points out that in spite of the large number of observations which have been recorded in regard to this condition there are still certain matters which have not been sufficiently elucidated from the experimental standpoint. Among these he refers to the part played by microbes in producing the morbid conditions found in trichinosed patients and animals, the toxic action of the larvæ, and the immunity of certain species of animals to infection. M. Romanovitch alludes in a footnote to the correction of the name of the parasite from trichina spiralis to trichinella spiralis, and to the suggestion for naming the condition produced by it as trichinellosis, but he is of opinion that this correction has not yet become widely adopted, and for convenience he therefore employs the old nomenclature. His experiments have been carried out upon the rat and the guinea-pig. He finds that the female trichina penetrates into the intestinal walls, usually stopping in the subepithelial layer and not passing the muscularis mucosæ. In opposition to the statement of Cerfontaine, M. Romanovitch finds that the parasite does not reach the mesenteric lymphatic glands. The female parasite deposits the larvæ in the lymphatics or sometimes in their neighbourhood. The larvæ reach the blood stream by way of the lymphatics. He therefore suggests that in a case where meat suspected of being trichinosed has been eaten it may be useful to examine the blood daily, since by this means the condition may be diagnosed much earlier. The larvæ may reach serous cavities, like the pleuræ or peritoneal cavity, but they do not find conditions favourable for their lodgment and therefore they perish rapidly. Owing to the widespread loss of the intestinal epithelium, which forms one of the most striking features in recent cases of infection by trichina, it might be expected that the way would be open to infection by microbes. M. Romanovitch is convinced that the fever, the enlargement of the spleen, the abscesses, and the fatal septicæmia which sometimes occurs are due to microbes inoculated by the trichina in its passage through the mucous membrane. In regard to the production of toxins by the parasite, he has found that the serum of infected rats and guinea-pigs shows toxic properties which may develop as soon as nine days

after the ingestion of trichinosed meat. The serums from infected animals are toxic for both rats and guinea-pigs—that is, they are at the same time isotoxic and heterotoxic. The toxicity of the serum of a guinea-pig is in direct proportion to the intensity of the infection with larvæ. The urine of animals with a very marked infection may also show toxic properties. The attempt to establish the existence of specific antibodies in the serum of trichinosed animals did not give satisfactory results, neither by the method of precipitins nor by that of complement fixation. The antigen used in these experiments was an aqueous extract of trichinosed muscles. M. Romanovitch has observed examples of spontaneous reinfection among his experimental animals, an observation which he regards as confirmatory of the experiments of Rappreeht and Askanazy, demonstrating the impossibility of immunising animals against a fresh infection. He also finds that there is at present no preventive or abortive treatment of the disease. Experiments made with "606" proved fruitless.

THE REPORT OF THE INSPECTOR UNDER THE INEBRIATES ACTS, 1879-1900, FOR THE YEAR 1910.

HAVING presented last year an exhaustive report on the whole question of the working of the Inebriates Acts,[1] Dr. Branthwaite in his report for the year 1910 has confined himself in the main to furnishing the information necessary to conform with statutory requirements. The report is divided as usual into three sections, dealing respectively with retreats, certified reformatories, and State reformatories. During the year 457 inebriates were admitted to licensed retreats, 158 of these persons being admitted under the Act—that is to say, after signing a request for reception before a justice of the peace, while 299 entered as private patients by simple agreement with licensees. These numbers differ very little from the average figures for the last few years. It is to be regretted that no information is given in the report with regard to the after-history of the inebriates who have passed through the retreats. Their numbers are now sufficiently large to furnish evidence as to the reformatory influence of institutional treatment, and also as to the period during which such treatment should be applied in order to produce a permanent effect. For obvious reasons the patients who are dealt with under the voluntary system in retreats are better material for the formation of an opinion on these points than the wastrels and degenerates who are committed as criminal inebriates to the certified reformatories. In the section of the report dealing with these latter institutions Dr. Branthwaite mentions that the steady decrease for some years past in the number of committals under the Act of 1898 has led to the closing of the Southern Counties Reformatory at Lewes and also to the temporary disuse of the reformatory at Ackworth. The loss of these establishments is regrettable in view of the fact that the amending Bill now before Parliament may be expected to encourage magistrates to give another trial to the principle of prolonged detention in the treatment of the police-court drunkards.

NEPHRITIS AND QUARTAN MALARIA.

IT is a truism in clinical medicine that any general infection may implicate and injure the kidneys; and from this general fact, the vulnerability of the renal tissues to the attacks of blood-borne bacteria, we may pass to a further generalisation—namely, that most cases of parenchymatous nephritis in which no cause is obviously to be seen are probably due to some occult infective process. This advance is aided by such observations as those of Mr. J. Tertius Clarke, published in the *Journal of Tropical Medicine and Hygiene* of May 1st. He quotes from various authoritative writings on the subject of malaria to show that the conventional attitude of the profession towards the relation between malaria and renal disease is that slight albuminuria is a fairly common complication of malaria, especially of the more malignant forms. Mr. Clarke, who writes from the Federated Malay States, takes up a much more definite ground, especially in regard to quartan ague. He says that of 62 hospital cases presenting the symptoms of nephritis (œdema, weakness, albuminuria, and shortness of breath) only five complained of fever, leaving a group of 57 cases of "idiopathic" nephritis. Examination of blood films from these patients discovered the presence of malarial parasites, of the quartan type in nearly every instance, in no less than 32 cases, or 56 per cent. of the whole. In 20 of the 62 cases there was reason to suspect a previous syphilitic infection. Obviously this is of considerable importance from the therapeutic point of view, since both syphilis and malaria are amenable to satisfactory treatment. Mr. Clarke's conclusion is that in the Malay States the occurrence of albuminuria indicates a search for quartan parasites, and (if this fails) for syphilis. This search is made the more needful by the absence of fever in the majority of the malarial cases.

PRESERVATIVES IN CREAM.

THE regulations defining the conditions under which preservatives may be used in cream, which were drafted by the Local Government Board a short time ago,[1] have, it is understood, been withdrawn in order that they may be modified. The precise nature and extent of the proposed alterations are not known, but there is reason to believe that the President of the Local Government Board, in revising the draft regulations, will endeavour, as far as possible, to comply with the suggestions of dairy-farmers and dealers in cream which were recently explained by representatives of the industry.

A SPECIAL meeting of Fellows of the Royal Society of Medicine will take place on Monday next, June 10th, at 4.30 P.M., at the society's new house, No. 1, Wimpole-street, W., when a discussion will be held on "Syphilis: (*a*) Its Prevalence and Intensity in the Past and at the Present Day; (*b*) Its Relation to Public Health, including Congenital Syphilis; (*c*) the Treatment of the Disease." The discussion will be opened by Dr. Norman Moore, Dr. F. W. Mott, and Mr. D'Arcy Power, and will be continued on Monday, June 17th, and Monday, June 24th, at 5 P.M. The following gentlemen will take part in the discussion: Mr. Ernest Lane, Mr. Jonathan Hutchinson, Mr. J. E. R. McDonagh, Mr. P. Macleod Yearsley, Dr. G. Pernet, Mr. H. W. Bayly, Major H. C. French, R.A.M.C., Mr. C. F. Marshall, Sir George Savage, Mr. Campbell Williams, Dr. Douglas White, Mr. F. E. Fremantle, and Mr. H. R. Dean, and the debate will be wound up by the President, Sir Henry Morris, Bart.

WE understand that so far the following are the candidates for the four vacancies in the Council of the Royal College of Surgeons of England: Sir Frederic Eve, Sir Anthony Bowlby, and Mr. H. Gilbert Barling (who all seek re-election); Mr. L. A. Dunn, Mr. Ernest Lane, Mr. B. G. A. Moynihan, and Mr. D'Arcy Power. In the analysis which we published last week of the distribution of the present representatives amongst the medical schools St. George's Hospital should have been included as supplying one member of Council.

AT a meeting held on June 4th at Caxton Hall, London, under the presidency of Mr. John Burns, M.P., President of the Local Government Board, it was decided to form a

[1] THE LANCET, Sept. 9th, 1911, p. 772.

[1] See THE LANCET, March 2nd, 1912, p. 592.

National Association for the Prevention of Infant Mortality and the Promotion of the Welfare of Children under School Age.

THE summer meeting of the Otological Section of the Royal Society of Medicine is to be held in Manchester, under the presidency of Dr. William Milligan, to-day (Saturday, June 8th).

THE KING EDWARD VII.'S HOSPITAL, CARDIFF.

A NEW PATHOLOGICAL BLOCK.

THE formal opening at Cardiff of the block devoted to pathology and bacteriology, which took place on Saturday, June 1st, marks a further stage towards the development of the Medical School of the University of Wales. By a mutual arrangement between the authorities of the King Edward VII.'s Hospital and the University College, it has been possible to combine in one institution the examination of material for the hospital, and at the same time make full provision for the teaching of pathology and bacteriology to both undergraduate and post-graduate students. This arrangement signifies the community of interests and good feeling existing between the authorities of these two institutions, whereby the highest possible efficiency is assured. In other respects the arrangement is an ideal one, inasmuch as the material for the purposes of teaching and demonstration is at hand, while by it, also, the services of the holder of the chair of pathology and bacteriology at the University College are available for the hospital in the capacity of an honorary pathologist and bacteriologist.

A distinguished company, representative of many and diverse interests, including Dr. C. Powell White, Manchester University, and Professor I. Walker Hall, Bristol University, over whom Major-General Lee, the chairman of the board of management of the hospital, presided, assembled in one of the large wards of the new wing of the hospital. After letters of apology from Sir William Osler and others had been read, the Lord Mayor of Cardiff, in well-chosen words, introduced Mr. W. James Thomas, a munificent and generous benefactor of the hospital, who, in a speech expressing the appreciation of the honour and pleasure he experienced in being associated in such an important step as they were taking that afternoon, dwelt upon the close and intimate affiliation of the hospital and University College, Cardiff. He said that the building they were about to open that day was an advance in the right direction, and he was proud to be associated with that epoch in the making of a medical school. He was informed that the Welsh student was singularly adapted for medical work, and he looked forward in the near future to the excellent prospects such a school would afford of being able to place at the services of the inhabitants of the district the latest researches of science combined with the greatest medical skill which they as a civilised community ought to be proud to place at the services of its members. He congratulated the citizens of Cardiff, the people of Glamorgan, the board of management of the hospital, the University College of Cardiff, and all concerned on the completion of that excellent building.

The opening address was delivered by Sir ISAMBARD OWEN, Vice-Chancellor of the University of Bristol, and for many years the Senior Deputy Chancellor of the University of Wales, to whom the community owes a heavy debt of gratitude for his skilful guidance of its efforts in higher education. Sir Isambard Owen in eloquent words recalled that in 1900 he was present at a meeting in London in support of the movement and first heard of Dr. William Edwards's munificent gift. He commended the lines along which the medical school had been laid down, and paid a tribute from his experience as a London teacher to the worth of the medical students from Cardiff. He said that the first stage in the teaching of medicine was the foundation of an Institute of pathology, and he gave an interesting sketch of the rise of pathology during recent years. He showed what pathology had done, and was doing, for the public, and asked what the public had in turn done for pathology, adding that Cardiff at least could give some answer to that question.

On the motion of Dr. H. A. SCHÖLBERG, seconded by Professor E. EMRYS-ROBERTS, a hearty vote of thanks was accorded to Sir Isambard Owen for his address.

Principal GRIFFITHS proposed a cordial vote of thanks to Mr. Thomas, and expressed the indebtedness he had laid upon the community as a whole, the medical profession in particular, and above all the poor, sick, and infirm who came to that institution for succour. He said they looked for the building of a great complete medical school for Wales, and if their dream was to be realised, and it was being steadily realised, it would be with the hearty coöperation and cordial union of those connected with the University College and the hospital. Neither of them could advance really separately, it could only be done by union, and in that matter they might regard Mr. Thomas as the founder of that complete medical school, and to him they desired to tender their most sincere appreciation of his great and wise generosity. If in future they had a Welsh Pasteur or Lister those who looked back at the school would remember that Mr. Thomas took no small part in making such an achievement possible. In these days they might say that wealth was on its trial. The questions that men asked were these: Were those who were possessed of great wealth using it rightly? Were they worthy of its possession? Whether our future progress was to be one of voluntary advance or of destructive revolution depended, he believed, on men who realised their trust in the manner that it had been realised by Mr. Thomas, for such examples must soften the asperities of social strife, which to a certain extent was raging at present. Every time they could point to a right use of wealth they had the greatest of all arguments against destructive actions. Would that every wealthy man realised to the extent of Mr. Thomas this great trust, this important duty, and this critical position in which they were placed.

The vote was seconded by Dr. C. T. VACHELL and carried with acclamation, after which the company proceeded to the pathological department. Here the key of the new building was presented by Colonel Bruce Vaughan, on behalf of the board of management, to Mr. THOMAS, who declared the department open.

Colonel BRUCE VAUGHAN, in handing the key to Mr. Thomas, said the honour which they had paid him that day, and of which he was so worthy, was suggested by Lord Merthyr, as president of the University College, and his suggestion was unanimously accepted by the board of management. He wished also to say publicly that it was by Mr. Thomas's noble generosity that not only was the building completed, but that all the beds in the new wing would very soon be opened, and, further, that the great encouragement he had given to the speaker in his personal work for the hospital had greatly assisted in all the efforts which had been made for it. He could not but associate with him in that great work the names of Lord and Lady Bute, Lord and Lady Aberdare, "A Glamorganshire Owner of Property," Mrs. John Nixon, and Lord Merthyr, whose practical sympathy had meant so much to the progress of the hospital.

The Rev. W. E WINKS pronounced the benediction, after which a visit of inspection was made through the various rooms.

The building comprises the basement in which are located the power room, electric motor, and freezing plant, which not only produces ice for the whole hospital, but is used for the refrigerator chambers in the mortuary; a sterilising-room, two store-rooms, and a combined photo-micrographic and dark room. On the ground floor are the mortuary, provided with freezing chambers for nine bodies; a mortuary chapel, of extremely tasteful design; a post-mortem room, 31 ft. 6 in. by 19 ft. 6 in., provided with two tables and all necessary appliances; the floor is paved with mosaic, the walls are tiled to the ceiling, and the room is well lit and well ventilated. The chemical laboratory, especially equipped for Dr. Schölberg, is fitted with working benches, large fume-closet, still, steam ovens, air compressor, shaker, blower, electric motors, and full provision for compressed air and steam on benches. A cloak-room and lavatory accommodation are also provided on this floor. First floor: A demonstration room, 31 ft. 6 in. by 19 ft. 6 in., furnished with working benches capable of accommodating 16 students, with professor's table and sliding blackboard; this room communicates with all floors by means of a lift, and all the fittings have been specially designed. Professor

Emrys-Roberts's room is on this floor. This room is in communication with the other parts of the building. There are also a clinical laboratory, where the routine work of the hospital is carried out, and two research rooms, each capable of accommodating two workers. An incubator room is isolated by means of slag wool throughout, and heated and kept at blood heat by regulated gas radiators. A room has been set apart for centrifuges. On the second floor there is situated the museum, 38 ft. by 36 ft., lit by north top light extending the whole length of the room; out of it leads a small room intended for demonstrations and reading.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN the 95 largest English towns having an estimated population of 17,639,816 persons in the middle of this year, 8666 births and 4386 deaths were registered during the week ending May 25th. The annual rate of mortality in these towns, which had been 13·9, 14·2, and 12·7 per 1000 in the three preceding weeks, rose to 13·0 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual death-rate in these 95 towns averaged 13·8 per 1000, and was 0·5 per 1000 in excess of the average rate recorded in London during the same period. The annual death-rates in the several towns during the week under notice ranged from 4·6 in Cambridge, 5·8 in Oxford, 5·9 in Tottenham, 6·1 in Swindon, and 6·4 in Darlington, to 18·5 in Stoke-on-Trent and in Manchester, 19·1 in Barnsley, 19·5 in Cardiff, 19·7 in Wigan, and 23·0 in Rotherham.

The 4386 deaths from all causes in the 95 towns were 94 in excess of the number in the previous week, and included 476 which were referred to the principal epidemic diseases, against numbers rising from 400 to 448 in the four preceding weeks. Of these 476 deaths from the principal epidemic diseases, 204 resulted from measles, 122 from whooping-cough, 69 from infantile diarrhœal diseases, 47 from diphtheria, 20 from scarlet fever, and 14 from enteric fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·4 per 1000, against 1·2 and 1·3 in the two preceding weeks. The deaths attributed to measles, which had been 138, 131, and 161 in the three preceding weeks, further rose to 204, and caused the highest annual death-rates of 1·5 in Bristol, 1·6 in Salford, 1·7 in Manchester, 1·8 in Gateshead, 1·9 in Dewsbury and in Merthyr Tydfil, 2·2 in Liverpool, 4·9 in Rotherham, 6·2 in Cardiff, and 7·7 in Ipswich. The deaths referred to whooping-cough, which had increased from 132 to 152 in the three preceding weeks, declined to 122; the highest annual death-rates from this disease were 1·4 in Plymouth, in Smethwick, and in Stockport, 1·7 in Wigan, 2·1 in Gloucester, and 3·0 in Barnsley. The fatal cases of diarrhœa and enteritis among infants under 2 years of age, which had averaged 65 in the three preceding weeks, rose to 69, and included 27 in London and its suburban districts, 8 in Liverpool, and 3 in Birmingham. The deaths attributed to diphtheria, which had been 37, 43, and 36 in the three preceding weeks, rose to 47; 9 deaths were registered in London, 9 in Portsmouth, 3 in Stoke on Trent, and 3 in Swansea. The deaths referred to scarlet fever, which had averaged 17 in the three preceding weeks, rose to 20, and included 4 in London, 3 in Birmingham, 2 in Preston, and 2 in Dewsbury. The fatal cases of enteric fever, which had been 17, 13, and 17 in the three preceding weeks, declined to 14 in the week under notice; 4 deaths were recorded in Bradford and 2 in London.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had been 1214, 1242, and 1213 at the end of the three preceding weeks, was 1231 on May 25th; 182 new cases of this disease were admitted to these institutions during the week, against 158, 168, and 146 in the three preceding weeks. These hospitals also contained at the end of the week under notice 961 cases of diphtheria, 600 of whooping-cough, 335 of measles, and 32 of enteric fever, but not one of small-pox. The 1065 deaths from all causes were 47 in excess of the number in the preceding week, and were equal to an annual death-rate of 12·3 per 1000. The deaths referred to diseases of the respiratory system, which had declined from 226 to 167 in the three preceding weeks, further fell to 150, and were 3 fewer than the number in the corresponding week of last year.

Of the 4386 deaths from all causes in the 95 towns, 161 resulted from different forms of violence and 343 were the subject of coroners' inquests. The causes of 32, or 0·7 per cent., of the deaths registered were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and its 14 suburban districts, in Leeds, Bradford, Bristol, Hull, Newcastle-on-Tyne, Nottingham, and in 52 other smaller towns. The 32 uncertified causes of death in the week under notice included 4 in Liverpool, 3 in Birmingham, and 2 each in Portsmouth, Bury, Manchester, South Shields, and Gateshead.

In the 95 largest English towns, having an estimated population of 17,639,816 persons in the middle of this year, 7315 births and 4270 deaths were registered during the week ending June 1st. The annual rate of mortality in these towns, which had been 14·2, 12·7, and 13·0 per 1000 in the three preceding weeks, declined to 12·6 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual death-rate in these 95 towns averaged 13·7 per 1000, and was 0·6 per 1000 in excess of the average rate recorded in London during the same period. The annual death-rates in the several towns last week ranged from 4·4 in Ilford, 5 0 in Wakefield, 5·3 in West Bromwich, 6·2 in Southend-on-Sea and in Lincoln, and 6·5 in Cambridge, to 17·1 in Huddersfield, 17·5 in Nottingham, 17·6 in Birkenhead, 18·9 in Liverpool, and 23·8 in Rotherham.

The 4270 deaths from all causes in the 95 towns were 116 fewer than the number in the previous week, and included 397 which were referred to the principal epidemic diseases, against numbers steadily rising from 400 to 476 in the five preceding weeks. Of these 397 deaths 166 resulted from measles, 103 from whooping-cough, 56 from infantile diarrhœal diseases, 34 from diphtheria, 20 from enteric fever, and 18 from scarlet fever, but not one from small-pox. The mean annual death-rate from these diseases was equal to 1·2 per 1000, against 1·3 and 1·4 in the two preceding weeks. The deaths attributed to measles, which had increased from 131 to 204 in the three preceding weeks, declined to 166 last week, and caused the highest annual death-rates of 2·1 in Liverpool, 3·2 in Merthyr Tydfil, 5·1 in Cardiff, and 7·4 in Rotherham. The deaths referred to whooping-cough, which had been 139, 152, and 122 in the three preceding weeks, further declined to 103 last week; the highest annual death-rates from this disease were 1·3 in Salford, 1·6 in Birkenhead, 1·7 in Wigan, and 2·1 in Ipswich. The fatal cases of diarrhœa and enteritis among infants under two years of age, which had been 66, 65, and 69 in the three preceding weeks, fell to 56 last week, and included 11 in London, 5 in Nottingham, 4 in Liverpool, and 3 each in Birmingham, Manchester, and Bradford. The deaths attributed to diphtheria, which had been 43, 36, and 47 in the three preceding weeks, declined to 34 last week; 7 deaths were recorded in London, 3 in Bristol, 3 in Leeds, and 2 each in Eastbourne, in Liverpool, and in West Hartlepool. The deaths referred to enteric fever, which had been 13, 17, and 14 in the three preceding weeks, rose to 20 last week, and included 6 in Bradford, 4 in London, 2 in Portsmouth, and 2 in Rhondda. The fatal cases of scarlet fever, which had been 19, 17, and 20 in the three preceding weeks, were 18 last week; 3 deaths were registered in London and 3 in Birmingham.

The number of scarlet fever patients under treatment in the Metropolitan Asylums and in the London Fever Hospital, which had been 1242, 1213, and 1231 at the end of the three preceding weeks, had further increased to 1245 on Saturday last; 155 new cases of this disease were admitted to these institutions during the week, against 168, 146, and 182 in the three preceding weeks. These hospitals also contained on Saturday last 957 cases of diphtheria, 586 of whooping-cough, 380 of measles, and 32 of enteric fever, but not one of small-pox. The 1002 deaths from all causes in London were 63 fewer than the number in the previous week, and were equal to an annual death-rate of 11·6 per 1000. The deaths referred to diseases of the respiratory organs, which had steadily declined from 226 to 150 in the four preceding

weeks, further fell to 143 in the week under notice, but were 9 in excess of the number recorded in the corresponding week of last year.

Of the 4270 deaths from all causes in the 95 towns last week, 185 resulted from different forms of violence, and 373 were the subject of coroners' inquests. The causes of 35, or 0·8 per cent. of the deaths registered were not certified either by a registered medical practitioner or by a coroner after inquest. All the causes of death were duly certified in London and in its 14 suburban districts, in Manchester, Sheffield, Bristol, Bradford, Hull, Newcastle-on-Tyne, Nottingham, and in 55 other smaller towns. The 35 uncertified causes of death last week included 9 in Birmingham, 4 in Liverpool, 3 in Stoke-on-Trent, and 2 each in Grimsby, Burnley, South Shields, and Gateshead.

HEALTH OF SCOTCH TOWNS.

In the 18 largest Scotch towns, with an aggregate population of 2,182,400 persons in the middle of this year, 1136 births and 644 deaths were registered during the week ending May 25th. The annual rate of mortality in these towns, which had been 15·6, 15·9, and 15·8 per 1000 in the three preceding weeks, further declined to 15·4 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual rate of mortality in these Scotch towns averaged 16·0 per 1000, and was 2·2 per 1000 in excess of that recorded in the 95 large English towns during the same period. The annual death-rates in the several Scotch towns during the week under notice ranged from 6·5 in Clydebank, 7·6 in Falkirk, and 7·9 in Hamilton, to 18·9 in Coatbridge, 19·6 in Paisley, and 21·8 in Ayr.

The 644 deaths from all causes were 17 fewer than the number in the previous week, and included 64 which were referred to the principal epidemic diseases, against 55 and 71 in the two preceding weeks. Of these 64 deaths, 29 resulted from measles, 14 from whooping-cough, 10 from infantile diarrhœal diseases, 6 from diphtheria, 3 from scarlet fever, and 2 from enteric fever, but not one from small-pox. These 64 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·5 per 1000, against 1·4 per 1000 in the 95 large English towns. The deaths attributed to measles, which had been 49, 23, and 32 in the three preceding weeks, fell to 29, and included 8 in Partick, 5 in Glasgow, 5 in Coatbridge, and 4 in Paisley. The deaths referred to whooping-cough, which had increased from 9 to 17 in the three preceding weeks, declined to 14; 5 deaths occurred in Glasgow, 4 in Dundee, and 3 in Edinburgh. The fatal cases of diarrhœa and enteritis among infants under two years of age, which had been 10, 8, and 16 in the three preceding weeks, declined to 10; 3 cases were registered in Glasgow, 2 in Dundee, and 2 in Aberdeen. The deaths attributed to diphtheria numbered 6, against 3 in each of the two preceding weeks, and comprised 3 in Glasgow, 2 in Dundee, and 1 in Edinburgh. The 3 deaths referred to scarlet fever, 2 of which were recorded in Greenock, were equal to the average in the three preceding weeks. The 2 fatal cases of enteric fever were registered in Glasgow.

The deaths referred to diseases of the respiratory system, which had been 109, 87, and 103 in the three preceding weeks, declined to 89; and 27 deaths were attributed to different forms of violence, against 31 in each of the two preceding weeks.

In the 18 largest Scotch towns, with an aggregate population of 2,182,400 persons in the middle of this year, 1146 births and 629 deaths were registered during the week ending June 1st. The annual rate of mortality in these towns, which had decreased from 15·9 to 15·4 per 1000 in the three preceding weeks, further declined to 15·0 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual rate of mortality in these Scotch towns averaged 15·9 per 1000, and was 2·2 per 1000 above that recorded in the 95 large English towns during the same period. The annual death-rates in the several Scotch towns last week ranged from 6·5 in Clydebank, 8·0 in Paisley, and 10·0 in Motherwell, to 19·6 in Dundee, 20·1 in Coatbridge, and 22·5 in Kilmarnock.

The 629 deaths from all causes were 15 fewer than the number in the previous week, and included 57 which were referred to the principal epidemic diseases, against 71 and 64 in the two preceding weeks. Of these 57 deaths, 25 resulted from measles, 10 from whooping-cough, 10 from diphtheria, 7 from infantile diarrhœal diseases, 3 from scarlet fever, and 2 from enteric fever, but not one from small-pox. These 57 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·4 per 1000, or 0·2 per 1000 higher than that in the 95 large English towns. The deaths attributed to measles, which had been 23, 32, and 29 in the three preceding weeks, declined to 25 last week, and included 6 in Glasgow, 5 in Dundee, 4 in Edinburgh, and 4 in Coatbridge. The deaths referred to whooping-cough, which had been 15, 17, and 14 in the three preceding weeks, fell to 10 last week; 5 deaths were registered in Glasgow and 2 in Dundee. The fatal cases of diphtheria, which had averaged 4 in the five preceding weeks, rose to 10 last week, 7 of which occurred in Glasgow. The deaths of infants under 2 years of age attributed to diarrhœa and enteritis, which had been 16 and 10 in the two preceding weeks, declined to 7 last week, and included 3 in Dundee. The 3 deaths referred to scarlet fever and the 2 fatal cases of enteric fever were all recorded in Glasgow.

The deaths referred to diseases of the respiratory system in the 18 Scotch towns, which had been 87, 103, and 89 in the three preceding weeks, slightly rose to 93 last week; and 25 deaths were attributed to different forms of violence, against 31 and 27 in the two preceding weeks.

HEALTH OF IRISH TOWNS.

In the 22 town districts of Ireland, having an estimated population of 1,157,014 persons in the middle of this year, 646 births and 375 deaths were registered during the week ending May 25th. The annual rate of mortality in these towns, which had steadily decreased from 23·3 to 18·6 per 1000 in the five preceding weeks, further declined to 16·9 per 1000 in the week under notice. During the first eight weeks of the current quarter the mean annual death-rate in these Irish towns averaged 20·1 per 1000; in the 95 large English towns the mean annual death-rate during the same period did not exceed 13·8 per 1000, while in the 18 Scotch towns it was equal to 16·0 per 1000. The annual death-rates in the several Irish towns in the week under notice were equal to 17·8 in Dublin (against 12·3 in London), 17·1 in Belfast, 17·7 in Cork, 15·3 in Londonderry, 16·3 in Limerick, and 19·0 in Waterford, while in the 16 smallest of these towns it was equal to 14·2 per 1000.

The 375 deaths from all causes were 37 fewer than the number in the previous week, and included 34 which were referred to the principal epidemic diseases, against numbers decreasing from 49 to 28 in the three preceding weeks; of these 34 deaths, 14 resulted from whooping-cough, 9 from measles, 8 from diarrhœal diseases, 2 from scarlet fever, and 1 from diphtheria, but not one from enteric fever or from small-pox. These 34 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·5 per 1000; the death-rate from these diseases during the same period was equal to 1·4 per 1000 in the 95 large English towns, and to 1·5 per 1000 in the 18 Scotch towns. The deaths attributed to whooping-cough, which had been 15, 10, and 7 in the three preceding weeks, rose to 14, and included 8 in Belfast, 2 in Dublin, and 2 in Limerick. The deaths referred to measles, which had declined from 16 to 8 in the four preceding weeks, numbered 9, and were all registered in Dublin. The fatal cases of diarrhœa and enteritis, which had decreased from 13 to 7 in the four preceding weeks, were 8 in the week under notice, and with one exception related to infants under two years of age; 4 deaths occurred in Dublin and 2 in Belfast. The 2 deaths attributed to scarlet fever were recorded in Dublin and Belfast respectively, and the fatal case of diphtheria in Dublin.

The deaths referred to diseases of the respiratory system, which had steadily decreased from 135 to 87 in the six preceding weeks, further declined to 74 in the week under notice. Of the 375 deaths from all causes in the 22 Irish towns 121, or 32 per cent., occurred in public institutions, and 7 resulted from different forms of violence. The causes of 12, or 3·2 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 95 English towns the proportion of uncertified causes of death did not exceed 0·7 per cent.

In the 22 town districts of Ireland, having an estimated population of 1,157,014 persons in the middle of this year,

612 births and 399 deaths were registered during the week ending June 1st. The annual rate of mortality in these towns, which had continuously decreased from 23·3 to 16·9 per 1000 in the six preceding weeks, increased to 18·0 per 1000 in the week under notice. During the first nine weeks of the current quarter the mean annual death-rate in these Irish towns averaged 19·9 per 1000; in the 95 large English towns the corresponding death-rate did not exceed 13·7 per 1000, while in the 18 Scotch towns it was equal to 15·9 per 1000. The annual death-rates in the several Irish towns last week were equal to 19 1 in Dublin (against 11·6 in London), 14·9 in Belfast, 21·1 in Cork, 12·7 in Londonderry, 20·4 in Limerick, and 28·5 in Waterford, while in the 16 smallest of these towns it was equal to 19·8 per 1000.

The 399 deaths from all causes were 24 in excess of the number in the previous week, and included 31 which were referred to the principal epidemic diseases, against 28 and 34 in the two preceding weeks; of these 31 deaths, 12 resulted from measles, 6 from whooping-cough, 6 from diarrhœal diseases, 5 from diphtheria, and 2 from scarlet fever, but not one from small-pox or from enteric fever. These 31 deaths from the principal epidemic diseases were equal to an annual death-rate of 1·4 per 1000; the death-rate from these diseases during the same period was equal to 1·2 per 1000 in the 95 large English towns and to 1·4 per 1000 in the 18 Scotch towns. The deaths attributed to measles, which had been 15, 8, and 9 in the three preceding weeks, rose to 12 last week, and were all recorded in Dublin. The deaths referred to whooping-cough, which had been 10, 7, and 14 in the three preceding weeks, fell to 6 last week, and included 4 in Belfast. The fatal cases of diarrhœa and enteritis, which had been 8, 7, and 8 in the three preceding weeks, were 6 last week, all but 1 of which referred to infants under two years of age; 3 deaths occurred in Dublin and 2 in Belfast. The deaths referred to diphtheria numbered 5, against 4, 3, and 1 in the three preceding weeks, and included 3 in Dublin. The 2 fatal cases of scarlet fever were recorded in Dublin and Cork respectively.

The deaths referred to diseases of the respiratory system, which had steadily decreased from 135 to 74 in the seven preceding weeks, further fell to 72 in the week under notice. Of the 399 deaths from all causes in the 22 Irish towns, 133, or 33 per cent., occurred in public institutions, and 1 death resulted from violence. The causes of 16, or 4·0 per cent., of the total deaths were not certified either by a registered medical practitioner or by a coroner after inquest; in the 95 English towns the proportion of uncertified causes of death did not exceed 0·8 per cent.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments have been notified:—Fleet Surgeons: J. F. Hall and H. W. Gordon-Green to the *Collingwood* and *Duncan* respectively, on return of the *Duncan* to England; E. S. Tuck to the *Cæsar*, additional, for the *Illustrious*, on recommissioning; C. H. J. Robinson to the *Cæsar*, additional, for the *Prince George*, on recommissioning. Staff-Surgeon: W. Bastian to the *Victory*, additional, for disposal, and to the *Skirmisher*. Surgeons: L. C. Hunt to the *Tamar*, additional, for Hong-Kong Yard; A. O. Hooper to the *Neptune*, additional, for the *Swift*; J. McCutcheon to the *Vivid* for Royal Naval Barracks.

ROYAL ARMY MEDICAL CORPS.

The undermentioned Captains to be Majors (dated May 30th, 1912): Charles H. Carr, Edmund Bennett, Arthur C. Adderley, and Edward S. Worthington, M.V.O.

Lieutenant Maurice Drummond resigns his commission (dated June 5th, 1912).

Colonel E. Butt has taken up duty as Principal Medical Officer of the Seventh (Meerut) Division of the Northern Army in India. Brevet-Colonel R. S. F. Henderson, Honorary Surgeon to His Majesty the King, has been selected for appointment to command the Station Hospital at Quetta in succession to Lieutenant-Colonel F. W. Caton Jones, transferred to Meerut Cantonment. Colonel B. M. Skinner, M.V.O., has taken up duty as Officiating Commandant and Director of Studies at the Royal Army Medical College.

Lieutenant-Colonel J. W. Bullen has been transferred from the Burma Division to the Seventh (Meerut) Division. Lieutenant-Colonel W. B. Thomson has been selected to hold charge of the Military Hospital at Northampton in succession to Lieutenant-Colonel W. S. Dowman transferred to Kingston-on-Thames. Lieutenant-Colonel J. Fallon has taken over charge of the Military Hospital at Dalhousie. Lieutenant-Colonel G. G. Adams has been appointed to command the Military Hospital at Colaba. Lieutenant-Colonel C. H. Hale has been transferred from the Fifth (Mhow) Division to the Burma Division to command the Station Hospital at Maymyo.

Major L. F. F. Winslow, at present holding charge of the Military Hospital at Sheffield, has been placed under orders for service abroad during the coming trooping season. Major H. G. Martin, on return from a tour of duty at Lebong, India, has been posted to the Dublin District. Major F. G. Richards has taken up duty in the Cork District. Major F. Harvey has been transferred from Bodmin to Devonport. Major C. B. Lawson has been transferred from the Royal Victoria Hospital, Netley, to the Military Hospital at Shorncliffe as Specialist in Operative Surgery. Major A. E. Smithson has arrived home on duty from South Africa. Major H. N. Dunn has been appointed to the Southern Command for duty on arrival home from India. Major F. J. Palmer, specialist in operative surgery to the Seventh (Meerut) Division, has arrived home on four months' general leave of absence. Major A. H. O. Young has taken up duty at Halifax in charge of the Military Hospital. Major E. W. Slayter has been appointed Residency Surgeon at Mount Abu and to the Medical Charge of the Lawrence School. Major W. Tibbits has joined at Chatham for duty.

Captain E. G. Ffrench has been transferred from the Sixth (Poona) Division to the Ninth (Secunderabad) Division. Captain J. McKenzie has been transferred from London to Windsor. Captain T. Scatchard, on return from Ranikhet, has been appointed for duty in the Northern Command. Captain J. D. Richmond has taken up duty at the Military Hospital, Edinburgh. Captain G. H. Rees has joined the Belfast District. Captain M. C. Wetherall, Captain A. A. Meaden, and Captain J. H. Campbell have been selected to attend the next promotion course at the Royal Army Medical College. Captain E. G. Anthonisz has arrived home for duty from India. Captain G. G. Tabuteau has been posted for duty to the Irish Command. Captain S. L. Pallant has been appointed Specialist in Otology at the Royal Victoria Hospital, Netley. Captain J. H. Duguid has embarked for a tour of service in India. Captain J. A. Anderson has been appointed to the Scottish Command. Captain W. D. C. Kelly, specialist in operative surgery at the Royal Infirmary, Phœnix Park, Dublin, has been placed under orders for service abroad during the coming trooping season.

Lieutenant A. G. Jones has been transferred from Tidworth Military Hospital, Salisbury Plain, to Oxford. Lieutenant R. C. Paris has joined for duty at Quetta Cantonment. Lieutenant H. V. Stanley has embarked for a tour of service at Gibraltar. Lieutenant E. C. Deane has been transferred from Preston to Chester. Lieutenant P. C. Field has left Bordon for a tour of service in Egypt. Lieutenant E. L. Fyffe has been transferred from Cork to the Military Hospital at Fermoy. Lieutenant T. C. R. Archer, from the Royal Herbert Hospital at Woolwich, has been transferred to Hounslow. Lieutenant G. H. Dive, Lieutenant L. C. Hayes, Lieutenant A. G. Jones, Lieutenant K. Comyn, and Lieutenant F. R. Laing have been placed under orders for service abroad during the coming trooping season.

INDIAN MEDICAL SERVICE.

Colonel H. Thomson, Sanitary Commissioner of Madras Presidency, has been appointed to officiate as Principal Medical Officer of the Bangalore Brigade. Lieutenant-Colonel D. T. Lane has been appointed Civil Surgeon at Sialkote. Lieutenant-Colonel C. F. Fearnside has been appointed Superintendent of the Central Jail at Trichinopoly. Lieutenant-Colonel S. B. Smith, chief plague medical officer in the Punjab, has been selected to officiate as Chief Malaria Officer in the Punjab during the absence on leave of Lieutenant-Colonel J. R. Adie. Lieutenant-Colonel J. R. Roberts has been selected for appointment as Surgeon to H.E. the Viceroy and Governor-General in India, in succession to Lieutenant-Colonel F. O'Kinealy.

Major C. A. Sprawson has been selected for appointment

as Professor of Physiology at King George's Medical College, Lucknow. Major J. H. Hugo has arrived home on leave of absence from India. Major J. G. Hulbert, civil surgeon at Muttra, has been appointed to officiate as Medical Officer of the Aligarh District during the absence on leave of Major G. Hutcheson. Major H. Kirkpatrick has taken up duty as Superintendent of the Government Ophthalmic Hospital in Madras during the absence of Major R. H. Elliot. The services of Major E. L. Perry have been replaced at the disposal of the Government of the Punjab. Major D. N. Anderson has arrived home on leave of absence from India. Major E. S. Peck has relinquished charge as Superintendent of the Jullundur District Jail. Major L. P. Stephen has taken up duty as Civil Surgeon at Nasik, relieving Captain A. J. V. Betts.

Captain G. C. L. Kerans has arrived home on leave of absence from India. The services of Captain A. Cameron, plague medical officer in the Punjab, have been replaced at the disposal of the Government of India in the Department of Education. Captain H. C. Keates has passed the higher standard examination in the Baluchi language by the prescribed test. Captain W. H. Riddell has been granted six months' leave of absence home from India on medical certificate. Captain F. H. Stewart, in charge of the Base Hospital of the Abor Expeditionary Force, has returned to India on completion of the campaign. Captain T. C. Rutherford, civil surgeon at Bilaspur, has been placed on special duty at the Central Research Institute, Kasauli. The services of Captain J. H. Burgess have been placed at the disposal of the Government of Bengal for employment as Surgeon to H.E. the Governor of Bengal. Captain H. Halliday, civil surgeon at Lyallpur, has been transferred to Murree Cantonment. Captain C. Gill has arrived home on leave of absence from India. Captain J. McPherson has been granted four months' extension of leave. Captain C. E. Southon has taken up duty as Plague Medical Officer at Rawal Pindi.

SPECIAL RESERVE OF OFFICERS.

Royal Army Medical Corps.

Captain Herbert Dalby to be Major (dated April 11th, 1912). Robert Cecil Dickson, late Cadet, University of Edinburgh Contingent, Officers Training Corps, to be Lieutenant (on probation) (dated May 6th, 1912).

No. 18 Field Ambulance, Royal Army Medical Corps: Major Fred D. Woolley to be Lieutenant-Colonel (dated April 1st, 1912).

TERRITORIAL FORCE.

Royal Army Medical Corps.

3rd Home Counties Field Ambulance, Royal Army Medical Corps: Lieutenant-Colonel John J. de Z. Marshall is retired under the conditions of paragraph 116 of the Territorial Force Regulations, and is granted permission to retain his rank and to wear the prescribed uniform (dated June 5th, 1912).

Major George A. Edsell to be Lieutenant-Colonel (dated June 5th, 1912).

1st West Lancashire Field Ambulance, Royal Army Medical Corps: Major John Joseph O'Hagan, from the 2nd West Lancashire Field Ambulance, Royal Army Medical Corps, to be Lieutenant-Colonel (dated June 5th, 1912).

1st Northumbrian Field Ambulance, Royal Army Medical Corps: The undermentioned officers to be Captains:—Lieutenant William T. Harkness (dated Feb. 21st, 1912) and Lieutenant Arthur G. Dunn (dated April 21st, 1912).

3rd West Riding Field Ambulance, Royal Army Medical Corps: Benjamin Branford Morgan, to be Lieutenant (dated April 1st, 1912). John Fitz-Gerald Gwynne, to be Lieutenant (dated June 5th, 1912).

For attachment to Units other than Medical Units.—William Norman West West-Watson, to be Lieutenant (dated April 18th, 1912). Captain John A. Kendall, to be Major (dated April 30th, 1912). Lieutenant William J. Best resigns his commission (dated June 5th, 1912).

COLONIAL MEDICAL SERVICES.

West African Medical Staff: Mr. B. Flood, medical officer, Northern Nigeria, retires with a gratuity. The following gentlemen have been selected for appointment to the staff: Mr. P. W. Black (Northern Nigeria), Mr. W. C. E. Bower (Sierra Leone) Mr. W. Browne (Southern Nigeria), Dr. W. G. Cobb (Northern Nigeria), Mr. H. de C. Dillon (Southern Nigeria), Mr. L. Doudney (Northern Nigeria), Mr. M. Graves (Gold Coast), Dr. W. B. Johnson (Northern Nigeria), Mr. C. Kelsall (Southern Nigeria), Dr. K. Manson (Southern Nigeria), Dr. R. H. Nolan (Northern Nigeria), Dr. M. W. Ruthven (Southern Nigeria), Mr. F. C. V. Thompson (Gambia), and Dr. F. G. Thompson (Gold Coast).—*Other Colonies and Protectorates:* Dr. B. Buchanan has been selected for appointment as a medical officer with the work of house surgeon in the Straits Settlements. Dr. W. H. Hart has been selected for appointment as a medical officer in the Straits Settlements. Dr. V. W. T. McGusty has been selected for appointment as a medical officer to Fiji. Dr. C. W. McKenny has been selected for appointment as a Medical Officer in Hong-Kong. Dr. J. H. Paterson, late medical officer, Northern Nigeria, has been selected for appointment as Colonial Surgeon in the Falkland Islands. Dr. D. T. Skeen has been selected for appointment as a Medical Officer (Grade III.) in the Federated Malay States, and Mr. V. G. L. van Someren has been selected for appointment as a Medical Officer in the East Africa Protectorate.

UNITED SERVICES MEDICAL SOCIETY.

The Transactions of the United Services Medical Society (Part V., January to March, 1912) contains some papers of interest. Lieutenant-Colonel C. H. Burtchaell, R.A.M.C., in "The Medical Service with Lord Methuen's Force during the Advance on Kimberley, 1899," illustrated with maps, gives a practical example of the work and tactical dispositions of field medical units; and, in addition to its medical interest, the paper is a readable reminiscence of an exciting period of the South African war. Covering for the feet is an important subject for the soldier as well as for the civilian, and the paper on Boots, by Lieutenant-Colonel C. H. Melville, R.A.M.C., is an interesting contribution on a matter which unfortunately has received too much attention from the hands of the faddist. The author points out that "if the modern boot is irrational and anatomically wrong, it is very largely because self-styled reformers have tried to induce people to wear what I can only term leather coverings for the feet that no man with any respect for his appearance could go about in." He maintains that it is quite possible to have a boot that neither violates the laws of anatomy nor is hopelessly at variance with the ordinary customs of the day. Much of the extravagant writing about foot-gear, he thinks, has resulted from people forgetting that the shod man walks in an entirely different manner from the unshod man. Mr. A. H. Tubby's "Structure and Functions of the Foot" deals with many points which can be profitably studied in connexion with the forementioned paper by Colonel Melville. Dust Traps and Their Dangers on Board Ship, by Fleet-Surgeon A. Gaskell, R.N., is a warning that the proverbial cleanness of the British man of war is sometimes more apparent than real when viewed from a hygienic standpoint. As transport ships are frequently used for troops this paper will appeal to the military as well as to the naval surgeon.

MEDICAL GOLFING SOCIETY. — The annual tournament of this society will be held on Thursday, June 20th, at Eltham, by kind invitation of Eltham Golf Club. Anyone on the Medical or Dental Register can join by payment of the annual subscription of 5s., which includes entrance to the tournament. Cards may be handed in till 7.30 P.M. Play will be as follows: 18 holes match play *v.* bogey under handicap. Class I.: handicaps 10 and under; Class II.: handicaps over 10. Handicap limit 18. The "Henry Morris" challenge cup and the Medical Golfing Society's gold medal will be awarded for the best return under handicap. A first and second prize and a prize for the best last nine holes will be given in each class. Dr. John Clarke has kindly presented a rose bowl for the best first nine holes under handicap. A foursome sweepstake will be arranged in the afternoon. Players must send subscription and entry, with lowest club handicap, on or before Monday, June 17th, to Mr. L. Eliot Creasy, honorary secretary and treasurer, Medical Golfing Society, 36, Weymouth-street, London, W. The Eltham Golf Club is within 30 minutes' run in a motor car from the Marble Arch. It can be reached from Charing Cross, Waterloo, Cannon Street, or London Bridge Stations, or by tram.

Correspondence.

"Audi alteram partem."

NATIONAL MEDICAL UNION.

To the Editor of THE LANCET.

SIR,—In consequence of the misunderstanding shown, and the persistent mis-statements expressed, by some members of the profession as to the objects of the National Medical Union, it is considered desirable to once again publicly reiterate our policy, which is not in any way in opposition to that of the British Medical Association. So that the matter may be placed beyond all possible doubt, we would draw your attention to the more important resolutions which have been passed from time to time, and which are appended to this statement. From these resolutions it will be seen that the National Medical Union originated in the desire to strengthen the hands of the members of the British Medical Association, and to unite non-members in a solid phalanx, so that the great fight which we have to face might be brought to a successful issue, and the dignity and liberty of our profession preserved, and that the ruin that threatens many general practitioners might be averted.

The later resolutions clearly show that this point of view has never been lost sight of, but that the Union has done all in its power to keep the evils and dangers of the Act before the medical profession, and to stiffen the backs of our leaders in this struggle. It will be seen that a general meeting of the Union, feeling the necessity for strong generalship in the crisis, instructed the executive to take the necessary steps to ensure this, and to deal with the question of supporting candidates whose views were in harmony with those of the National Medical Union. The action they have taken has received the approval of the general committee, which consists of 60 members drawn from all over the country. That the men in Manchester are not alone in their opinions of the past leadership (as has been stated) is shown by the voting at the annual general meeting of the Cardiff division. Upon the men who are returned to the council the future of private practice depends, and we would remind your readers that this is the only form of practice which has stood the test of time.

Great as is the loss already sustained by medical men owing to depreciation of capital value due to the National Insurance Act, it is nothing compared with the loss which they would sustain by the extinction of private practice, and the substitution of the cheap contract work the Act proposes. The National Medical Union would welcome the abolition of all contract practice. It supports the British Medical Association in its aims (although not in all its methods), as the chief representative of the profession. It insists on the principles of the "seven cardinal points" being maintained. It is opposed to any attempt to weaken the position of the profession as the guardian of the public health, and of its own rights.

The National Medical Union recognises that a National Insurance Act on a contributory basis is a necessity of the times, and believes that a scheme could be devised not incompatible with the interests and reasonable demands of the profession. But it cannot admit that the present Act, as it stands, in any way meets the situation.

THE RESOLUTIONS ALLUDED TO ABOVE.

Nov. 18th, 1911 (Mass Meeting, Manchester).—"That in the opinion of this meeting the National Insurance Bill as at present framed does not satisfactorily embody the demands of the medical profession, as defined in the 'six cardinal points' formulated by the British Medical Association; that the scheme of the Bill in its present form is unworkable, and will create a condition of affairs not only detrimental to the medical profession but also dangerous to the public health; therefore this meeting of the medical profession of Lancashire and Cheshire expresses its determination in the event of the Bill becoming law in its present form to unite with the whole of the profession in declaring its inability to undertake the duties which the Bill proposes to assign to it."

Dec. 14th, 1911 (Mass Meeting, Manchester).—"This meeting of the medical profession in pursuance of the resolution passed unanimously on Nov. 18th, and generally adopted throughout the country, now recognises that the only satisfactory method of meeting the situation created by the Government is for the members of the profession to refuse to form a Panel under the 'Bill' or to undertake any duties which the 'Bill' proposes to assign to them."

"That in the opinion of this meeting it is advisable to form at once a National Medical Union to deal immediately with the conditions arising out of the National Insurance Bill, and *to strengthen the hands of the members of the British Medical Association* and all other societies and committees now engaged in safeguarding the interests of the medical profession."

The objects of the Union were then stated to be: (1) "The coördination of members and non-members of the British Medical Association"; (2) "the voicing of the attitude of this profession towards the National Insurance Bill, 1911, as it now stands for enactment"; (3) "facilitating an organised refusal of service under the Bill."

Dec. 22nd, 1911 (Provisional Executive Committee).—"That the members of the National Medical Union shall promise to oppose the medical service of the National Insurance Act, 1911, by at once declining to go on any panel or committee, and by refusing to undertake any of the duties which the Act proposes to assign to them."

Jan. 26th, 1912.—"That in the opinion of this committee of the National Medical Union medical men either in a private or public capacity ought not to take any office under the Act until the 'six cardinal points' are guaranteed."

Feb. 6th, 1912.—Resolution for adoption by the Special Representative Meeting: "That it be an instruction to the Council that they notify all those who have signed the pledge of the British Medical Association that they must not go on any panel or undertake any of the duties which the Act proposes to assign to them, and that this instruction remain in force until such time as the 'six cardinal points' are unreservedly conceded in such a manner that they cannot be altered or withdrawn in the future except by Act of Parliament and with the consent of the members of the medical profession."

March 15th, 1912 (Finance and Defence Committee).—"That the National Medical Union immediately confer as to the state of club practice and the means to be taken to prevent its further extension, or procure its total abolition if no panels be formed."

March 24th, 1912 (General Meeting of the Union).—"That this meeting expresses its approval of the action of the Representative Meeting of the British Medical Association so far as it goes, and assures the British Medical Association of its further support, but regrets that they have thought fit to allow their members to sit on the Advisory Committee before the 'six cardinal points' have been granted."

"That the National Medical Union use its best endeavours to ensure that the new Representatives and the members of the new Council shall be as far as possible members of this Union or in sympathy with its objects."

April 24th, 1912 (Finance and Defence Committee).—"That all schemes for public medical service be condemned that are on the principle of payment by capitation fee."

April 26th, 1912 (Organisation Subcommittee).—At this meeting, at which several consultants were present, held to consider the following pledge sent from a local medical society—viz.: "That in the event of the British Medical Association requiring that no medical practitioner shall undertake medical service under the National Insurance Act owing to the failure of the Commissioners to embody in the Regulations the 'six cardinal points' of the Association, I, the undersigned, undertake to refuse to see any insured person under the care of any medical practitioner or to meet in consultation any whole-time medical officer or any practitioner serving under the Act or carrying on contract practice contrary to the wishes of the British Medical Association"—the following resolution was passed: "If in the event of corporate action being called for by the British Medical Association (this being contingent on the withdrawal of medical benefit) a pledge be required from the practitioners to undertake no office under the Insurance Act, this subcommittee expresses its sympathy with the resolution, and suggests that the consultants be asked to meet together and to form such rules of conduct as will be agreeable to all concerned."

May 2nd, 1912 (Liverpool mass meeting).—(1) "That this meeting of the medical profession affirms its absolute adhesion to the 'six cardinal points,'" and in addition to a seventh, viz.: "That disciplinary powers be vested in some properly constituted and representative medical body." These principles form the basis of the policy of the British Medical Association, and of the National Medical Union, and this meeting pledges itself actively to support the Union." (2) "That this meeting supports all candidates for election to the Central Council of the British Medical Association who hold the views of the National Medical Union, and pledges itself to canvass in the Lancashire and Cheshire Branch for the election of Dr. O'Sullivan of Liverpool and Dr. Reynolds of Manchester." (3) "That this meeting protests against the action of the Government in neglecting to give a clear and definite answer to a letter directed to the Insurance Commissioners by the State Sickness Insurance Committee of the British Medical Association of Feb. 29th, in which letter the minimum demands of the profession were stated."

May 9th, 1912 (General Committee).—"That the work of the Election Committee and the covering letter proposed to be sent out be approved."

It is of vital importance to the British public and to the welfare of the medical profession that the men elected to the Council of the British Medical Association should command the confidence of the whole of the members of the Association, and be qualified to deal prudently and vigorously with the difficult position and problems with which the practitioner of medicine is now faced. It is notorious that in this, the greatest crisis in our history, the present Council signally failed in their generalship. Since the "great awakening" of the profession, which dates from the mass meetings held in Manchester and London, a much stronger attitude generally has been taken up. There has been a great "stiffening" in the Representative body, and the State Sickness Insurance Committee, composed of men cognisant of the threatened dangers, has been formed and is doing good work.

The National Medical Union is convinced that, if universal confidence in the British Medical Association is to be restored, and if the profession is to maintain the high position of the past, a considerable change in the *personnel*

of the Council must be assured. It has given much time to the matter, and it urges upon its members, and upon all members of the British Medical Association, to use their influence in securing the return of those named in the following list:—

Yorkshire Branch.—James Metcalfe, M.D.
Lancashire and Cheshire Branch.—Jerome Eugene O'Sullivan, L.R.C.P. Edin., Ernest Septimus Reynolds, M.D.
East York, North Lincoln, and Midland Branches.—Frank Montague Pope, M.D.
Cambridge and Huntingdon, E. Anglian, and S. Midland Branches.—John George Durran, M.B.
Birmingham and Staffordshire Branches.—Albert Lucas, F.R.C.S.
Metropolitan Counties Branch.—Moses George Biggs, M.D., Major Greenwood, M.D., Basil Gordon Morison, M.D., Frederick John Smith, M.D.
Bath and Bristol, Gloucestershire, W. Somerset, and Worcestershire and Herefordshire Branches.—George Parker, M.D.
Dorset and West Hants and South-Western Branches.—Charles Henry Watts Parkinson, M.R.C.S.
Oxford and Reading and Southern Branches.—Walter John Turrell, M.D.
South-Eastern Branches.—William Joseph Tyson, M.D.

We are, Sir, yours faithfully,

G. A. WRIGHT, Chairman.
T. WHEELER HART,
J. SKARDON PROWSE, Hon. Secretaries.

5, John Dalton-street, Manchester, May 28th, 1912.

*** We publish in another column the full list of nominations from which the selected list has been derived.—ED. L.

ANGINA ABDOMINIS.

To the Editor of THE LANCET.

SIR,—I venture to describe below the probable source of pain production in such cases of angina abdominis as have been commented on recently in your columns by Sir Lauder Brunton and other contributors.

Four such cases have recently come under my notice:—Case A, pain in epigastrium, excited by walking; Case B, pain in epigastrium, left shoulder and arm, excited by walking; Case C, pain in epigastrium, both shoulders and arms, excited by walking; Case D, pain in epigastrium, excited by walking. This patient at times has suffered from severe attacks of angina pectoris, in which pain was limited to the upper parts of the chest, the neck, and the arms. In Cases A, B, C, and D there is no sign of organic disease.

In these cases there is one symptom in common—namely, pain in the epigastric region, and in all, pain is associated with algesia. In Cases A, B, and D the seat of algesia is the rectus muscle. The integuments over the muscle may be gently pinched without causing pain. In Case C the integuments are alone affected. In Case D a segment of the rectus muscle is sometimes found raised and hard upon palpation suggestive of the presence of an abdominal growth. In A, B, C, and D pain appears, and the algesic patch is found in the areas of distribution of the eighth and ninth intercostal nerves. I do not think anyone will be found to dispute the suggestion that pain in angina abdominis belongs to the referred type, and that impressions which excite it are of visceral origin. Nor will those who have adopted the new views on pain expounded by James Mackenzie, Head, Ross, Bertrand Dawson, and Hertz take exception to the inference that referred pain appearing in the distributory area of the eighth and ninth intercostal nerves is the result of hypertonus of gastric muscle. So far, then, we are on solid ground—namely, it can be contended that the epigastric pain in angina abdominis results from hypertonus of gastric muscle. It may also further be inferred that muscle undergoing hypertension is situated in the middle third of the gastric wall and in the pyloric vestibule.

In regard to Cases A and D, here the matter ends and there is no more to be said. In reference to Cases B and C, pain appears simultaneously in the epigastrium and in the arm. Since in these cases the epigastric and brachial phenomena always appear together and disappear at the same instant, they must be excited by a single agency, and if the epigastric symptom is induced by hypertension of gastric muscle the humeral and brachial pain must owe its origin to the same or an allied cause. It is necessary now to explain how hypertension of gastric muscle induces pain in the shoulder and arm.

In Case B pain occurs at the acromial region, at the back and inner side of the triceps muscle, at the groove on the posterior aspect of the inner condyle, at the inner border of the ulnar bone and at the dorsum of the hand, involving the ring and little fingers. This description of the region of pain incidence also serves in the case of C. It is obvious in these cases that humeral and brachial pain occurs in the distributory areas of the spinal accessory, the musculo-spiral and the ulnar nerves.

The next stage in our argument is to show the deep-root connexions which exist between these several nerves and the vagus centres. The vagi are connected at their deep roots with the medullary portions of the spinal accessory. The spinal portion of this nerve springs from a series of ganglia which constitute a descending chain extending as low as the fifth segment of the cervical cord.[1] Here the deep-root centres of the musculo-spiral nerve become associated with this chain, and at the seventh segment the deep roots of the ulnar nerve join the series. There is another direct anatomical connexion between the deep roots of the musculo-spiral nerve, the spinal accessory, and the vagus—namely, the fasciculus solitarius. Afferent fibres from the vagus have been traced into this bundle and constitute a part of it.[2] The fasciculus has been recognised as low as the fourth segment of the cervical cord, where its identity is lost; probably it descends still lower.

We must now consider how afferent impressions generated by hypertension or tetany of gastric muscle pass simultaneously from gastric muscle to the eighth and ninth segments of the thoracic cord, and also to the vagus centre. The greater number of the muscular fibres constituting the contractile coat of the stomach receive motor energy from the vagi; the rest from the eighth and ninth segments of the thoracic cord. In the pyloric vestibule strands of fibres receiving motor innervation from these sources are mixed. Since visceral muscle is innervated from both members of the autonomic group—the one supplying motor energy, the other inhibitory—the afferent nerves of gastric muscle must in part be directed to the medulla, and in part to the segments of the thoracic cord; consequently, it follows that pain impressions generated by hypertension or tetany of gastric muscle reach both the vagus centres in the medulla and the segmentary centres of the thoracic cord. This argument is particularly applicable when hypertonus is occurring in the pyloric vestibule where strands of muscle of converse innervation are mixed.

In Case B a phenomenon occurs during the seizure which confirms the views herein expressed of the implication of the vagus centre. At the time of pain incidence, a quantity of saliva, estimated at a cupful, fills the mouth and pours out in a stream; it is neither retched up nor coughed up, but, as the patient expressed it, "comes into his mouth on its own." It is evidently submaxillary glandular secretion, as when I examined his mouth during a seizure saliva was pouring freely from Wharton's duct. The chorda tympani, which, when stimulated, causes a flow of submaxillary secretion, is derived from the portio intermedia of the seventh cranial nerve, and the portio intermedia has its deep roots in connexion with the glosso-vagus accessory nuclei; consequently hypertension of gastric muscle induces a reflex which acts through the vagus centre upon the great salivary glands, causing a free flow of saliva. This reflex is brought into play in the prodromal stage of vomiting when salivary phenomena are frequent.

When an individual is predisposed to angina abdominis through increased irritability of medullary and spinal centres, an attack may be induced by any agency causing an increase in intra-gastric pressure. Hertz has shown that an increase in intra-gastric pressure of 12 to 14 mm. Hg induces hypertension of gastric muscle. On the other hand, pain subsides when intra-gastric pressure falls. Deflation of the stomach by eructation of flatus or by means of an œsophageal tube brings the seizure to an end. Nitro-glycerine, by lowering the tonus of gastric muscle, has a similar effect.

In these cases nothing abnormal was noticed as occurring in connexion with the action of the heart.

There is no possible doubt as to the existence of the gastric factor in the angina pectoris syndrome. It is referred to by many writers. Heberden in his famous description of the disease speaks of it: "Those who are affected with it

[1] Cunningham's Anatomy, p. 516.
[2] Ibid., p. 518, Fig. 417.

(angina) are seized while they are walking, and more particularly when they walk soon after eating." James Mackenzie, who has given much attention to the nature of the paroxysm, mentions the frequent association of flatus with the pain symptom, and suggests that air is swallowed by the patient in the initiatory stages and eructated in the later. He writes: "Another symptom is very common in these cases—namely, the belching of air."[3] In another place: "The chief feature is the noisy expulsion of air from the stomach";[4] and again: "The case may end by expulsion of air from the chest."[5] Douglas Powell observes: "Eructation gives relief."[6] "The patient vomits and becomes easier."[7] "Flatulent distension of the stomach is frequently an exciting cause."[8] "Flatulent distension is a frequent concomitant of anginal paroxysms."[9] "Dyspepsia is a frequent exciting cause."[10] R. Quain has noticed this symptom: "An oppressive meal of indigestible food brought on a first and distressing anginal attack followed by others."[11] It passes off with the escape of flatulent air from the stomach.[12] Stomach often affected, giving rise to eructations and vomiting.[13] Exciting cause, overloading the stomach.[14] Attack may terminate with vomiting or with eructations.[15] This phase of the subject has also received attention in the works of Russell and Gibson.

A patient under my own care, namely, Dr. X, on setting out for a walk seldom covers a distance of 80 yards without feeling thoracic pain and eructating flatus. If eructations are copious Dr. X is able to continue walking for miles without suffering any further attacks, but sometimes several recurrences of pain associated with expulsions of gas take place before a period of immunity is attained.

In the case of three patients, eructations of flatus do not occur, but if the stethoscope be applied to the left hypochondrium in the neighbourhood of the duodeno-jejunal flexure at the moment when the seizure is undergoing subsidence borborygmal sounds are usually heard, and sometimes the sound of rushing gas continues for several minutes afterwards. In the case of another patient, after the administration of nitro-glycerine, the same phenomenon was noticed. I have verified this sequence of events on many occasions. In one case, no very definite flatulent symptom was noticed, but heart-burn, nausea, and an uncomfortable sense of fulness were frequent accompaniments of the seizure. From these remarks it is observed that gastric symptoms occupy an important and probably a constant place in the anginal syndrome.

Fulness of the stomach, whether occasioned by the presence of an excess of solids, fluids, or gases, seems to have no effect by itself in exciting a seizure. Dr. X, in a series of experimental observations made just after a full meal, noticed that although sometimes the waistcoat had to be unbuttoned on account of distension of the abdomen, no symptoms occurred while he yet sat at table, but immediately after he got up and began to walk thoracic pain appeared, and the same result was noticed on several occasions when he stooped to pick up something from the floor and when pressure was otherwise brought to bear upon the gastric wall. Moreover, cardiac action remained normal as long as an attitude of rest was maintained, but as soon as exercise was begun and pain was felt the action of the heart became disturbed. Exercise, however, does not stand alone as the exciting cause of an attack. On one occasion it was induced by a heated discussion, on another by a draught of cold water, and on yet a third by a few sips of hot coffee.

There can be no doubt that although fulness of the stomach does not by itself excite an attack in persons predisposed to angina, yet it heightens the tendency to an attack. Before breakfast, when presumably the stomach is empty, paroxysms do not occur as soon during a walk as they do at other parts of the day. They are not as frequent when the dietary consists of meat as when it is made up of mixed foods among which sweets and starches occupy a prominent place. They occur less often and are not severe when gas is poured freely from the chest. After gastric lavage has been practised I have known patients walk many miles without pain, although for weeks before insignificant efforts had usually resulted in seizures, and when large doses of iodide of potassium are administered, which maintain an atmosphere of iodine in the stomach and intestines and thus prevent fermentation and voluminous accumulation of gas,[16] attacks of pain may cease altogether.

When exercise is taken by the healthy subject upon a full stomach, by the flatulent dyspeptic, or by the subject of angina, certain symptoms common to all occur. A sensation of fulness is felt in the epigastrium and a desire to eructate flatus is experienced. According to Hertz precisely similar symptoms are felt when intra-gastric pressure is raised by the induction of hypertonus of gastric muscle,[17] consequently it may be inferred that muscular effort induces hypertonus of gastric muscle, and that hypertonus is the cause of the gastric symptoms which make their appearance in the anginal subject when he walks soon after eating. That a full stomach predisposes to hypertonus is abundantly demonstrated by Hertz,[18] and hypertonus, whether excited by walking, by mental excitement, by sensory impressions, or by intra-gastric stimuli, may be regarded as inducing the gastric symptoms contained in the anginal syndrome.

The effects of hypertonus of gastro-œsophageal muscle upon the central and peripheral circulatory systems are illustrated in cases of gastrismus and œsophagismus.[19] The cardiac and circulatory symptoms associated with the prodromal stage of the simple vomiting attack demonstrate the profound impression produced by hypertonus of gastric muscle upon the heart and vessels through the central nervous system, and the progressive weakening of the contractile function of the myocardium by a prolonged season of paroxysms of œsophagismus is a matter to which references have been made and may be found sparingly in the literature of medicine.[20] The effect of gastro-œsophageal hypertonus upon the circulatory system is illustrated in a case described by Dr. William Russell, Royal Infirmary, Edinburgh, referring to which the following sentences occur:—

> The sensations which now more ordinarily precede an [anginal] attack were a sense of discomfort and distension in the stomach and attacks were often associated with definite flatulent distension, the escape of gas being followed by relief. The medical attendant noted that when the abdominal discomfort supervened the pulse-rate increased and there was distinct hypertonus, as the attack passed the vessel wall relaxed and the rate returned to normal.

In the same case it was noted "that any digestive upset at once threatened to produce an increased number of attacks."[21]

In short, in accordance with the preceding argument the anginal habit, whether of the abdominal or thoracic type, results from a state of increased irritability of certain medullary and spinal centres, and the paroxysm is excited by impressions reaching these centres from gastro-œsophageal muscle when in a state of hypertonus or tetany.

I am, Sir, yours faithfully,

Streatham Hill, S.W., June 1st, 1912. H. WALTER VERDON.

[3] Diseases of the Heart.
[4] Ibid. [5] Ibid.
[6] Allbutt's System, vol. vi.
[7] Ibid. [8] Ibid. [9] Ibid. [10] Ibid.
[11] Dictionary of Medicine, p. 53.
[12] Handbook of Medical Science, Buck, p. 227.
[13] Ibid.
[14] Medical Diagnosis, Stevens, p. 705.
[15] Ibid.

[16] During a course of treatment when Dr. X was taking 40 grains of iodide of potassium daily he lost 5 inches in abdominal girth.
[17] Hertz: Goulstonian Lectures.
[18] Ibid.
[19] Gastrismus, Twentieth Cent. Med., vol. x., pp. 539-540.
[20] Œsophagismus, T. M. Tibbetts, Practitioner, August, 1911, p. 237.
[21] Arterial Hypertonus, Russell, p. 141.

IS STARCH A SUITABLE FOOD FOR INFANTS?

To the Editor of THE LANCET.

SIR,—The annotation in THE LANCET of May 25th on this subject states that the evidence is against the use of starch-containing foods for infants. Apparently this conclusion is mainly based on "the fact that raw starch is not a constituent of the natural food of the quite young child, and even predigested starch can never be regarded as a satisfactory substitute for the milk fat, milk protein, and milk sugar." With the latter half of this conclusion I do not agree. The whole question is one of serious difficulty and importance, and not one to be settled by an *ex cathedrâ* statement. Probably your writer has paid little attention to some of the facts in relation to "Starch Digestion in

Babies," which I summarised and criticised in a paper on this subject in THE LANCET of Nov. 6th, 1909.

Undoubtedly the natural food of the young infant is the maternal milk. In former days, and even at the present date in certain countries and occasionally in this country, breast-feeding has been continued for two or three years. Yet we are not justified in assuming that such a practice is indicative of the unsuitability of starch during the first two or three years of life. In many, but not in all, instances of prolonged lactation the milk-supply has been supplemented by other food, usually of a starchy nature. At what date such supplementary food can be safely commenced depends on various factors, but chiefly on giving very small quantities. It is purely theoretical to take the eruption of teeth as a guide. Some infants cut their teeth late, others early, and in rare instances have teeth at birth.

When the natural food is not available an artificial substitute is given. This is generally some modification of cow's milk. Yet no matter how cow's milk is modified, it remains different from human milk and is certainly *not* "the natural food for the quite young child." Identity in chemical analysis, according to present-day methods of analysis, may be obtained, but the two fluids are not identical in biochemical characters. The infant's stomach has to be trained in the digestion of modified cow's milk. Similarly, if a starchy diluent is used as a component part of the food, the stomach has to be trained in the digestion of starch. Admirable results have been, and still are, obtained by feeding babies on milk and barley water, often from the early days of life. The late Dr. Jacobi, an eminent American authority who reached an advanced age, always advocated the use of barley or oatmeal water as a diluent of milk. It is of almost universal use.

On the grounds of physiological chemistry there is much recent evidence justifying the gradual addition of starch to the diet. It is true that "the saliva given out by a young child is nothing like that of a grown-up person." No one would assert that it is. On the other hand, there is proof that a diastasic ferment is secreted by the salivary glands and pancreas of the newborn, and even by the fœtus. Admitting that its amount and activity are slight at first, these glands can be trained to secrete an increased quantity of the amylolytic ferment. And I am unable to suggest any cogent reason why such a process of training should not be begun gradually in the early weeks of life, if the child has to be artificially fed, instead of waiting until some fixed date such as six months of age or the eruption of a tooth. Fundamentally it seems to me to be a question of quantity. Mixtures of milk and barley-water commonly contain 0·5 to 1 per cent. of starch. In giving starch to an infant it is essential to begin with a very weak solution, increasing the strength slowly according to results. If the stools become very acid or give a distinct starch reaction, reduce the strength of the starchy diluent.

Conclusions based on the percentage of raw starch in the various "foods for infants" are of no value. What is of importance is the percentage of unchanged starch in the mixture of which such a food is a part. In most cases the starch is partly digested by the heat and moisture in the process of preparation. My own conclusion is that starchy foods can be used with advantage, though not invariably so, and that the evil effects of the starch in the diet are due to (1) excess; (2) its administration as a more or less insoluble emulsion instead of chiefly as soluble starch; and, mainly, (3) the substitution of starch for the necessary fat, protein, and salts. Evil results from artificial feeding are quite as often due to a deficiency of the proximate principles of diet as they are to the starch present therein.

I am, Sir, yours faithfully,

Park-street, W., May 29th, 1912. EDMUND CAUTLEY.

RESEARCH DEFENCE SOCIETY.

To the Editor of THE LANCET.

SIR,—This society has taken temporary premises in Oxford-street, between Bond-street and Oxford-circus, next to a very lurid anti-vivisection shop. I hope that the members and associates of the society will approve of this action. If any should be inclined to think it undignified or vulgar, I hope that they will look into the windows of the anti-vivisection shop. I feel sure that when they have done that they will not think it amiss for the Research Defence Society to put the facts of the case before the public in the most conspicuous way that is possible.

I am, Sir, yours faithfully,

STEPHEN PAGET,
Honorary Secretary, Research Defence Society.

Ladbroke-square, London, W., May 29th, 1912.

THE HEIGHT OF BEDROOM WINDOWS.

To the Editor of THE LANCET.

SIR,—I beg to draw attention to the fact that the Local Government Board is prepared to sanction by-laws which can only be described as retrograde under Section 23 of the Public Health Acts Amendment Act with respect to the height of rooms intended to be used for human habitation. The Board's Model By-laws allow the walls of bedrooms to be only 5 feet high in part, if the height from the floor to the ceiling, over not less than two-thirds of the area of the floor, be not less than 8 feet. When it is remembered that it is the outside (or window) wall that would probably be 5 feet high, internal measurement, while the outside height, owing to the sloping roof, would be little more than 4 feet, it will be seen that it is almost impossible to have the top of the window, unless dormer windows are constructed, more than 3 feet above the bedroom floor. Thus a man could not look out straight through his bedroom window without going on his knees and then bending his back. The difficulties of ventilation also with such low windows would be insuperable.

It is not likely that dormer windows would be constructed, because the idea of this loose by-law is to cheapen construction, while the cost of a large dormer window would be almost equal to the amount saved over a bedroom of satisfactory height throughout. If houses constructed under this by-law become numerous the public health movement and the conquest of tuberculosis would be retarded at least 25 years.

I am, Sir, yours faithfully,

THOS. E. FRANCIS,
Llanelly, June 3rd, 1912. Medical Officer of Health.

THE TREATMENT OF ANAPHYLACTIC SHOCK.

To the Editor of THE LANCET.

SIR,—The pathology of anaphylactic shock has recently been described by Schulz and Jordan as due to spasm of the muscle fibres in the large bronchi resulting, in fatal cases, in asphyxia from complete occlusion of their lumina by folding of the mucous membrane. There is also a marked fall in the blood pressure in the systemic blood-vessels, probably due to a similar spasmodic contraction of the walls of the large arteries.

The following case, we think, will be of some interest. Mrs. ——, aged 43, is suffering from typical exophthalmic goitre of two years' standing. Some weeks ago treatment with small doses of thyroidectin was commenced, and it was found that while the thyroid gland had markedly decreased in size, and tremor and exophthalmos were improved, a far more alarming train of symptoms had developed. Dyspnœa became marked, the patient complained of acute pain in the epigastrium, and jaundice, diarrhœa, and vomiting followed. The pulse was markedly increased—160 per minute—the tension being very low. There was marked dilatation of the right side of the heart shown by jugular pulsation in the neck and extension to the right of the cardiac dulness. There was intense lividity of the skin and signs of cardiac failure. The patient was in a most critical condition and death seemed imminent from cardiac failure.

In view of a recent annotation in THE LANCET on anaphylactic shock,[1] we considered that this case fell under that heading, and that it might prove useful to your readers if we described our treatment of this serious condition. We stopped treatment by thyroidectin. The marked increase in the agglutinative power of the serum in typhoid patients exhibiting small hæmorrhages, either natural or artificially induced, pointed out by other observers, led us to hope that by venesection the power of the toxic proteins in the blood would be reduced, and we strongly recommended venesection. Six ounces of blood were drawn from the median

[1] THE LANCET, May 25th, 1912, p. 1419.

basilic vein, and 10-minim doses of 1 in 1000 adrenalin chloride were administered every two hours. Next day there was a marked improvement in the patient's condition. Breathing was easier: the blood pressure had evidently increased and the pulse-rate fell from 160 to 130 per minute. The lividity of the skin disappeared. The pulsation of the jugular veins was much less marked. Jaundice, diarrhœa, and vomiting ceased and the patient showed marked general improvement. The patient, indeed, seemed to have been snatched from imminent death.

Inasmuch as an annotation has quite recently appeared in THE LANCET on this interesting condition of anaphylactic shock and a case has occurred simultaneously in our practice, we hope that our treatment by venesection and by the administration of adrenalin chloride, which, so far as we are aware, has not been suggested by any other observer, may prove of value in other similar cases.

We are, Sir, yours faithfully,

H. M. WILSON, M.B.
J. R. O'BRIEN M.D

Swindon, May 31st, 1912.

HEDONAL AS A GENERAL ANÆSTHETIC ADMINISTERED BY INTRAVENOUS INFUSION.

To the Editor of THE LANCET.

SIR,—Seeing that, according to Mr. C. M. Page,[1] no deaths from hedonal anæsthesia have been recorded, we think it desirable to publish the following case, which may alter the possible impression, after reading Mr. Page's article, that this drug has no strong toxic properties.

On May 14th the patient, a female aged 31, in whom there was no organic disease and whose urine was normal, was operated upon in the Hull Royal Infirmary for necrosis of the superior maxilla. The strength of solution and details of procedure were identical with those described by Mr. Page except that the solution (made from Bayer's product) was run from a glass reservoir into a burette and thence into the cannula. At 8.54 P.M. the infusion was begun into the median basilic vein. In ten minutes' time the corneal reflex had disappeared, but side-to-side movements of the head asserted themselves on passing a probe into a sinus in the cheek. At 9.10 P.M. the patient was deemed sufficiently narcotised to proceed with the operation; she was a good colour and muscular relaxation was complete. During this time—a period of 16 minutes—420 c.c. of solution were introduced at a uniform rate—i.e., about 26 c.c. a minute. Occasional coughing occurred as blood collected in the fauces, showing that no great depth of narcosis had been established. This fact, the absence of any cyanosis, and the maintenance of a good pulse, were all reassuring factors. At 9.35 P.M., the operation being practically over, the injection was stopped. Between the commencement of the operation and the cessation of injection—a period of 25 minutes—another 220 c.c. of solution were introduced, giving a rate of under 9 c.c. a minute. In all, then, 640 c.c. of solution were used. The patient was put to bed and at 10 P.M. she was seen by one of us. The degree of narcosis appeared unaltered, the laryngeal reflex was present, and no anxiety was felt as to the ultimate issue. At 11.45 P.M. she was seen by the house surgeon to be sleeping quietly. The corneal reflex was absent, there was no cyanosis, and again the laryngeal reflex was present. At 1 A.M. the house surgeon was called and found her dead, the nurse reporting that the respirations had gradually become more shallow and ceased altogether, though an occasionally flickering pulse had persisted.

In the case reported by Mr. Barrington Ward in the discussion on Mr. Page's paper at the Royal Society of Medicine death appears to have resulted from respiratory failure, though the post-mortem diagnosis of status lymphaticus suggests that the narcotising agent was not wholly to blame. With regard to our case it is possible that intra-tracheal insufflation, had it been applied directly respiration began to flag, might have saved the patient. Unfortunately the warning came too late.

This, our first attempt with hedonal as an anæsthetic, was not encouraging. The total amount of solution used and the rate of injection were well within the prescribed limits, and at any future attempt with this method the technical modifications to be adopted are not obvious.

We are, Sir, yours faithfully,

HAROLD UPCOTT, F.R.C.S. Eng.,
Honorary Assistant Surgeon, Hull Royal Infirmary;
H. LOFT EVANS, M.R.C.S. Eng., L.R.C.P. Lond.,
June 3rd, 1912. Honorary Anæsthetist, Hull Royal Infirmary.

[1] THE LANCET, May 11th, 1912, p. 1258.

AN IMPROVED METHOD FOR OPSONIC ESTIMATIONS: A CORRECTION.

To the Editor of THE LANCET.

SIR,—I regret an oversight in my paper in THE LANCET of June 1st. All the figures in the second column in Table I. have to be multiplied by 200 to show the true numbers of leucocytes per cubic millimetre.

I am, Sir, yours faithfully,

London, W., June 3rd, 1912. CHARLES RUSS.

MERCURIO'S OR WALCHER'S POSITION.

To the Editor of THE LANCET.

SIR,—In reply to "The Writer of the Review," the only reason given in the review for correcting Dr. Davis for writing "position of Mercurio or Walcher" was "Mercurio's position, designed for the delivery of very fat women, is, however, quite different from that of Walcher." Dr. Davis was not dealing with the position for very fat women, and I pointed out that Mercurio also described and illustrated the "hanging legs" or "Walcher" position; this your reviewer now admits, but goes off on a new line with the remark that Mercurio was not the first to describe the position. The fact that another had previously described the "hanging legs" position (if for the same class of case) might be a reason for adding his name to "Mercurio or Walcher," or for substituting it for those names, particularly for Walcher, but is no justification for saying that Dr. Davis had made a slip and then irrelevantly writing about the position for fat women.

It is well known that Albucasis described the "hanging legs" position—not in the passage misquoted by your reviewer, which refers to the operation of dilatation of the cervix and describes the patient as "sitting on the bed with her feet hanging down," which in your reviewer's opinion is "an extremely good description of the hanging legs position," and in my opinion does not describe a "hanging legs" ("Walcher") position at all but—in the following passage:—"Tum decumbat mulier in collum suum, pendeantque deorsum pedes ejus, illa vero in lectum decumbat," &c. Albucasis here gives the position for one specified case of presentation of both knees and hands (exitus fœtus super genua ambo sua et manus ambo suas) and not generally for cases of difficult labour, "tutte le gravide che difficilmente partoriscono," as Mercurio puts it.

For these reasons I think your reviewer was not right in correcting Dr. Davis. He corrects my supposed slips by relying on erring authority, probability, and belief, instead of on the facts shown in original copies, in the widely published photogravure reproduction of the title-page of the first edition by Ancarini, and in authors, such as Decio and Davidson, who dealt with the facts. An original copy of the first edition, which I have carefully examined, shows that it was published in 1596, the date on the title-page of the first book; the three books (not volumes) were probably *printed* in 1595; the second and third books have that date on the title-page. The author dates the preface to all three books 29th of June, 1595; but an epistle to the author by Zamboni da Schio is dated 30 Nov., 1595. It is probable, therefore, that the beginning of 1596 was reached before the work was ready for publication, and the later date was printed only on the title-page of the first book, 1595 being left on the other title-pages. The same difference of dates is found in the 1621 edition. The short title of the first edition is "La Comare," and not "La Commare," as your reviewer "corrects" it (from which error Fasbender might have saved him). It was only spelt with two m's in later editions. The spelling in those days, like that of your reviewer's "apirire," was varied and peculiar: our author is Mercuri in the first book, Mercurio and Mercurii in the second, and Mercurio in the third.

After all this, I hope readers of THE LANCET will speak of the "position of Mercurio or Walcher," and will remember

that the first edition of Mercurio's work was called "La Comare," and was published in 1596.

I am, Sir, yours faithfully,

Harley-street, W., June 1st, 1912. HERBERT SPENCER.

PYGMY CRANIA FROM EGYPT.

To the Editor of THE LANCET.

SIR,—I notice that in a letter to THE LANCET of April 27th Professor Karl Pearson takes some exception to my notice of the paper published by Miss H. Dorothy Smith (*Biometrika*, January, 1912), on Pygmy Crania from Egypt. I may state that my reason for considering that the skulls of many periods had been examined was that, although nine skulls said to be of the period of the third dynasty were described, one was also described from the Christian period, and one from the Ptolemaic-Roman times. I would point out that nowhere in the paper does the author mention how many of these third dynasty skulls were examined, and one did not expect from the poverty of authentic material available that the number of third dynasty skulls could have been large. I was therefore all the more surprised to see that Professor Karl Pearson states in his letter that no less than "1600 crania all from *one* period, the third dynasty," were examined before these nine small crania were unearthed.

This series of skulls must of necessity be of such paramount importance that Professor Karl Pearson should mention his reasons for regarding them as belonging to this dynasty; the question of their provenance being all the more important since Miss H. Dorothy Smith does not refer to it. Since the total number of skulls examined was not stated in the paper, your reviewer had not Professor Karl Pearson's advantage of knowing the percentage of these "pygmies"; but I would point out that, since Professor Karl Pearson admits that the crania "do not appear in any way pathological," his comparison of the percentage of their occurrence with the percentage of "pathological dwarfism" in modern Europe is quite beside the mark. Your reviewer maintains that these skulls are merely those of small individuals, adding that *no allowance whatever is made for the fact that of the nine small skulls eight are certainly those of women and the odd one is almost equally certainly female.* That in a total of 1600 persons nine women were found to be rather undersized seems to one who is not a professed biometrician to be but slight grounds for imagining that a pigmy race survived "longside the normal Egyptians of the third dynasty." I am, Sir, yours faithfully,

May 29th, 1912. THE REVIEWER.

THE MEDICAL PROFESSION AND THE NATIONAL INSURANCE ACT.

To the Editor of THE LANCET.

SIR,—Under the above very inclusive title you published on May 25th a scheme for a National Medical Service as a letter from Mr. Milson Russen Rhodes. This letter is a sketch or outline of a proposed policy of national medical insurance, indicating some of the features which would render such a scheme desirable, but at the same time the writer suggests the practical difficulties which would beset its introduction. Free preliminary discussion, not only of general policy and prominent features but of details of a practical nature, might have made a useful and practicable measure of the National Insurance Act. It is to be hoped that prolonged and detailed discussion will precede even the tentative introduction of any Bill to extend its principles. Not only the medical profession is concerned in the institution of a National Medical Service for the treatment of patients of all classes, and among medical practitioners there would be considerable diversity of opinion upon matters both of principle and detail. The public affected would consist of classes better entitled by education and financial independence to criticise any proposal for their supposed benefit, and with a better right to be satisfied with existing conditions than those affected as insured persons under Mr. Lloyd George's Act; and the public is the guest who, if he may not reckon without his host, the medical profession, in devising a scheme for dealing with him, must at the same time be allowed to say something before he incurs the debt which is to be assessed. Mr. Rhodes suggests, to quote an instance, that "(3) every householder or lodger already in or coming into a neighbourhood should be required to put his name down to the medical man of his choice." This, indeed, at the outset involves the free choice of a medical attendant by the patient, but another paragraph proposes to limit the number of persons that each medical man may have upon his list. A State medical service, even one duly organised for efficiency, must of necessity include men of varying qualifications, and the public would protest, not without sympathy and support from ambitious candidates for, and members of, the proposed service, that the selection of a medical practitioner is not quite like the choice of a motor-car from a manufacturer who turns out several hundred in a year upon the same pattern.

The best man, or he who established the reputation of being the best, in a given district, would find it difficult to reconcile himself to an income limited by statute, when patients assigned by State ordinance to another man would prefer to range themselves under his care, nor would be uncomplainingly confine himself to a State-regulated scale of fees when the law of supply and demand would otherwise place it within his power to increase them. On the other hand, patients entitled to medical advice in return for their own contributions to a State medical service would not approve of being compelled to select a medical attendant believed (rightly or wrongly) to be of inferior efficiency owing to the accident of delayed choice, possibly due to recent arrival in a new neighbourhood. Nevertheless, the provision of medical treatment for all at a State-fixed rate, combined with absolute freedom of choice by persons capable of inquiry, would necessarily thrust a preponderance of the work of a district into the hands of the best man or of the man with the best-established reputation. In the present circumstances the prosperous practitioner, by putting up his fees, can keep his income and the number of his patients at a point tolerably satisfactory to himself; but a State medical service, as Mr. Rhodes would seem to suggest, might be found to imply almost necessarily a system by which the free choice of a medical attendant and freedom on his part to accept or reject a patient would exist technically, but in fact would be considerably curtailed.

Discussion with regard to a revolutionary change of our medical system such as that indicated would no doubt serve to make prominent its probable advantages for the curing and, above all, for the prevention of disease; but in discussing it the two parties most interested, the medical profession and the public, their patients, will require to have something more than their material good as classes of the community carefully considered. Allowance will have to be made for private interests and private prejudices, and, as has been suggested, different interests and prejudices will be found to be involved when social strata above those for which the National Insurance Act has been passed are affected. I am, Sir, yours faithfully,

June 1st, 1912. E. A. ARMSTRONG.

CENTENARIANS.—Mrs. Mary Hughes, of Nine Wells, near St. David's, is 105 years old, and is said to be the oldest woman in Wales. It is stated that one of her brothers lived to be 103 years.—Mr. J. Lock, of 64, Jubilee-street, Plymouth, celebrated the 100th anniversary of his birthday on May 26th.—Mrs. Shelton, of High-street, Stroud, celebrated the 100th anniversary of her birthday on May 30th.

THE HEALTH OF EXETER.—The medical officer of health of Exeter, Mr. E. A. Brash, in his annual report for 1911, recently issued, states that the corrected death-rate of the city was 15·87 per 1000. The number of deaths under 1 year was 120, giving an infant mortality rate of 124 per 1000 births, as compared with 98 per 1000 in the preceding year. The increase in the infant mortality is largely due to the epidemic of measles and to the increase in the number of deaths from diarrhœa and enteritis. The birth-rate was 19·81 per 1000, being 0·8 lower than in 1910. Mr. Brash states that the voluntary notification of pulmonary phthisis, as far as the city of Exeter is concerned, has again been a complete failure, no case of that disease having been notified during the year.

TWELFTH ANNUAL MEETING OF THE CANADIAN ASSOCIATION FOR THE PREVENTION OF TUBERCULOSIS.

(FROM A SPECIAL CORRESPONDENT.)

TUBERCULOSIS is prevalent in parts of Canada, and especially in the Province of Quebec, where less has been done towards prevention and control than in the other portions of the Dominion. Twelve years ago, when this association was formed, there was but one institution for the tuberculous in Canada; now there are more than 20. Tuberculosis dispensaries and visiting nurses were then unknown; now there are over a dozen dispensaries and many visiting nurses. There are now also special lecturers of the association, in addition to the lectures given by physicians and officials of various societies and the health boards. Literature bearing on the matter is being disseminated by boards of health and local societies, as well as by the association, and the machinery of the association, with its adjunct societies and boards of health, is in excellent working order. Much has been accomplished in Canada by private philanthropy, especially through the munificence of the late Mr. Hammond, Mr. Gage, Colonel Burland, the Hon. Mr. Perley, Mr. Lorne McGibbon, Mr. John Ross Robertson, Mrs. Crerar, and the Hon. Adam Beck.

Opening of Annual Meeting.

The Canadian Association for the Prevention of Tuberculosis, founded in 1900 in Ottawa under the patronage of His Excellency the Earl of Minto, held its twelfth annual meeting in the Margaret Eaton Hall, Toronto, on May 20th and 21st, under the presidency of Professor J. George Adami, F.R.S., and with the patronage of His Royal Highness the Duke of Connaught, who, though unable to attend, wrote to express his sympathy with the movement and his earnest desire for its further advance. The papers read were of a uniformly high standard, and the only thing that marred the otherwise complete success of the gathering was the inclemency of the weather.

Dr. GEORGE D. PORTER (Toronto) secretary of the association, in presenting the twelfth annual report, reviewed the progress of the campaign against tuberculosis in the various provinces. The best results were shown where there had been cöoperation between the Government, the municipalities, and the local societies. He described the various agencies at work in each province, and pointed out that while proper care was of the utmost importance and segregation of advanced cases imperative, the disease could not be properly controlled until they had improved the conditions that favoured its spread.

Dr. D. A. CRAIG (Lake Edward, Quebec) read a paper in which he urged the rigid enforcement of notification.

Presidential Address.

During the afternoon of the first day Professor ADAMI delivered the presidential address, it being the fourth successive year that he had acted as president. Referring to the strictly scientific aspect of the question, he said that the last few years had given some very remarkable results with a group of infections other than tuberculosis. It had been long known that quinine killed the hæmamœba, the parasite of malaria. Those with much experience in the tropics also said that, if properly administered, ipecacuanha had a like specific effect on the amœba of dysentery; and recently Thomas, a Canadian and a graduate of McGill, had demonstrated that atoxyl, an arsenic compound, killed the parasites of sleeping sickness circulating in the blood, and the trypanosomes that set up a series of diseases in horses and other animals. Following upon this discovery Ehrlich had elaborated the arsenic compounds, which in a single dose cured conditions of spirillosis and destroyed all the spirochætæ in the organism. If this happened with animal parasites he could see absolutely no reason why other drugs should not be discovered which would have a like immediate action on the bacteria of disease. As a matter of fact, there was a disease which, like tuberculosis, was caused by one of the higher bacteria, by an organism closely related to the tubercle bacillus—lumpy-jaw or actinomycosis—and this could be cured rapidly by large doses of potassium iodide. It remained to continue their investigations until some drug or drugs should be discovered which would cure tuberculosis. There was still much work for physicians and bacteriologists. Science, in fact, was never-ending, and they must continue with shoulder to the wheel until tuberculosis was extinct. Professor Adami strongly emphasised the point that the main factor in the production of pulmonary tuberculosis was filthy crowded houses, and that to cope adequately with the disease there must be coöperation in the Dominion between provinces, municipalities, universities, and special associations.

Social Aspects of Tuberculosis.

Mrs. ADAM SHORTT (Ottawa) a member of the Convention of Women, which is doing useful work, read an excellent paper on "Some Social Aspects of Tuberculosis." She drew attention to the fact that the social aspects of the disease involved the study of heredity, eugenics, alcoholism, the feeble-minded and the insane, as well as industrial conditions, immigration, climate, infant mortality, the meat- and milk-supply, and the housing problem. As for tuberculosis, the initial step towards the right basis of action in prevention was to have thorough and complete medical inspection of school children. There should be medical inspection of all workshops and factories. This would give a detected case a chance of being cured, and would prevent the spread of the disease to the co-workers. It would also be a quick educative way to more hygienic conditions in such places. Mrs. Shortt asked why it was, if all this was so well known, that in so many cities there were still dirty overcrowded dwellings, contaminated water- and milk-supply, and no segregation of the feeble-minded. It was attributable, she said, to the two great giants, greater than humanity, "commercial interests" and "political inexpediency."

Dr. F. F. WESBROOK, Professor of Bacteriology at the University of Minnesota, dealt with modern public teaching and practice in relation to the control of tuberculosis, and criticised severely the faddists with their remedies and prescriptions. He also criticised the lay press for its attitude to patent medicines, quacks, and charlatans.

Administrative Control.

On the evening of May 20th, after Controller MCCARTHY, in the absence of the Mayor of Toronto, had welcomed the members of the association to the city, Dr. HERMANN BIGGS (New York) read a paper on the Administrative Control of Tuberculosis. He said that the inspection and notification of tuberculosis in New York had been so successfully developed that last year they had received 66,000 reports of cases. At first the medical profession had held aloof, but now they were heartily coöperating with the Board of Health. A great educational work had to be maintained, as the financial support from municipal sources was inadequate. Financial men, however, were learning that the prevention of disease was a profitable investment. He urged upon the association the importance of the establishment of a notification system as the key to a successful fight with tuberculosis in large cities.

Pre-tuberculous Stage.

On May 21st Dr. R. C. PATERSON (St. Agathe des Monts, Quebec) read a paper on the Importance of the Pre-tuberculous Stage. He did not believe it possible to recognise a true pre-tuberculous stage or to know whether a person was predisposed or not to tuberculosis until such time as he showed symptoms of the infection. The bacilli might, and probably did, remain latent in the tissues for a short time, causing only a slight hyperplasia before producing specific tubercles, but in this stage there was no method of clinically recognising their presence. In Dr. Paterson's opinion this was the true pre-tuberculous stage. There was, however, a stage in nearly every case in which the bacilli were localised, usually in some gland or group of glands, and from this focus they gained entrance to the blood or lymph stream, and thus were brought to the lungs or other organ where their existence was generally first recognised. This period, before the bacilli reached the lungs and became definitely localised there, was what was meant by the term "pre-tuberculous stage"; it might be more appropriately called "pre-pulmonary stage." 90 per cent. or more of human beings could be divided into four classes as regarded tuberculosis: (1) Those infected without showing any evidence of it during life; (2) those whose infection gave slight indefinite symptoms, easily recovered from under a

few months of hygienic life; (3) those who would recover with six months or longer of most careful treatment; and (4) those who would not recover under any treatment. These last needed to be cared for in homes for incurables. The third group formed the sanatorium cases; while it was to those of the second group that reference was especially made. They were usually neglected until they passed into the third or fourth classes. Finally, Dr. Paterson laid stress on what he designated the incontrovertible fact that practically every adult is or has been infected, and he held that if some of our energies were directed to preventing these infected persons from breaking down and developing pulmonary tuberculosis and to raising their powers of resistance, the results would be highly gratifying, and the mortality from tuberculosis would show in a few years a more marked decrease than had been the case during the past decade.

Another tuberculosis problem of the first importance, which, as yet, is very far from solution, is the question of how to deal with those discharged from sanatoriums to enable them to earn a living and to prevent them from becoming a menace to the community. This phase of the situation was ably discussed in two papers.

Graduated Labour.

The first of these was by Dr. OLLIVER BRUCE (London, Ontario), who described the treatment of pulmonary tuberculosis by graduated rest and exercise, whereby patients suitable for such measures were enabled to go out into the world and to fight the battle of life, and, in fact, were to a great extent cured. The treatment, he said, was initiated in Great Britain by Dr. M. S. Paterson,[1] but had now been reduced to a scientific basis at the sanatorium in connexion with the Brompton Hospital and at the Byron Sanatorium. Dr. Bruce pointed out that graduated labour was a series of artificial auto-inoculations. A patient with advanced disease, showing a high temperature every evening in spite of being at rest in bed, was undergoing a series of excessive inoculations accompanied by a fluctuating opsonic index. The dose of poison thrown out by the germs into the blood-stream was so great that an insufficient amount of protective substance was formed. If the opsonic index of such a patient was examined at certain intervals over a period of 24 hours it would be found that when his temperature was high his opsonic index would be low, and *vice versâ*. The opsonic index, in other words, varied inversely with the temperature. This was a most important point which was brought to light in the course of 300 blood examinations by Dr. A. C. Inman and himself at the Brompton Hospital. In regulating the amount of exercise to be prescribed in graduated labour some guide was necessary, some indication as to the amount of protective substances which were being elaborated as the result of the exercise. It would be found far too laborious a task to have to take the opsonic index as a guide, and the knowledge made possible the substitution for it of the temperature chart. The clinical symptoms and the feelings of the patient must be very carefully studied at the same time. The principle of the treatment was that by exercise the amount of opsonin or antibody in the blood could be raised, and, further, that the temperature chart and the feelings of the patient were a sufficient guide to an experienced observer as to whether the amount of exercise prescribed was too great or too little. The danger mark, the point signifying excessive auto-inoculation, had been fixed by Paterson at 99° F. in men and 99 6° F. in women. The first object was to reduce the temperature to below these points, and this was effected by rest in bed. After this the graduated labour method might be begun. The aim of the treatment was to raise the amount of anti-bacterial substance in the blood of the patient to as high a degree as possible and to keep it at that point by gradually increasing doses of his own tuberculin. Dr. Bruce reported very satisfactory results from this method, but strongly emphasised the fact that the treatment must be performed under the direct supervision of one who thoroughly understood its scientific basis. He also pointed out that the conditions present at the Brompton Hospital Sanatorium were peculiarly favourable for carrying out the method to a successful issue. There were 300 cases at the Brompton Hospital from which to select, and therefore only those best adapted for the treatment were chosen. Much interest was manifested in Dr. Bruce's paper, although the opinion was expressed that Canada did not seem to offer a favourable field for such treatment of tuberculosis.

[1] THE LANCET, Jan. 25th, 1908, p. 216.

After-care of Sanatorium Patients.

The next paper was a discussion of the care of the patient after leaving the sanatorium by Dr. C. D. PARFITT (Gravenhurst, Ontario). He criticised the graduated labour method of treatment, and questioned whether the ultimate results obtained by it would be as good as by methods depending on rest for a long period, with or without tuberculin, before the hardening by vigorous exercise had been begun. It was stated that a comparison made by Dr. Lawrason Brown between a number of patients from among those treated at the Brompton Sanatorium and those treated at the Adirondack Cottage Sanatorium respectively (half of the latter having received tuberculin), showed that three years after discharge 60 per cent. of the Brompton Sanatorium cases, as against 75 per cent. of the Adirondack Sanatorium cases, were now working. Dr. Parfitt insisted that the after-care of the consumptive was a social, as well as a family and personal, problem under the condition of delayed recognition of the disease at present obtaining.

Other Addresses, &c.

Considering the bad state of the weather the meeting was a great success. Most of the Canadian authorities on tuberculosis were present, including Sir James Grant and Dr. Charles Hodgetts (Ottawa), both of whom gave addresses.

Dr. HAROLD PARSONS, on the afternoon of May 21st, in the Children's Hospital, showed numerous X ray skiagrams of thoracic tuberculosis in children. Later in the afternoon a reception was given to the members of the association and other guests, by the Toronto Heather Club, in the magnificent nursing home at the back of the Children's Hospital. This was largely attended.

The Hon. Adam Beck (London, Ontario) was elected President of the association for the ensuing year.

SANITATION IN INDIA.

(FROM A SPECIAL CORRESPONDENT.)

Oudh and Agra.

DURING recent years the advancement of municipal and rural sanitation has been constantly urged upon the Government of India by its medical advisers, and in no portion of that country has the call to arms been louder than in the United Provinces, administered by Sir John Hewett, the Lieutenant-Governor of Oudh and Agra.

At a sanitary conference which met at Naini Tal in the year 1908 it was recommended that medical officers of health should be appointed in all the larger municipalities. In the case of Lucknow, Benares, Cawnpore, Agra, Allahabad, Bareilly, and Meerut, it was considered advisable that a medical officer should be appointed at a salary from Rs.300 to Rs.500 per mensem (£20 to £33 6*s.* 8*d.*). These officers were to possess British qualifications and, if possible, a degree or diploma in sanitary science. With regard to the other towns, it was recommended that all those with an annual income of Rs.50,000 and upwards should be required to keep a health officer from Rs.150 to Rs.300 (£10 to £20) per mensem. These would be required to undergo a special sanitary course designed to fit them for their duties, and it was not proposed to insist on the possession of a medical diploma.

These proposals were accepted by the Lieutenant-Governor and passed to Simla for the approval of the Government of India. The Government of India has recently expressed its general approval of the principles suggested, and although certain details still remain to be considered before the general scheme can be introduced, the following broad outlines which have been accepted are now promulgated officially by the Lieutenant-Governor of the United Provinces. In the first place, it is definitely stated that it is no longer to be left optional to the larger municipalities to appoint a health officer. The public interests demand that this should be made obligatory. The seven municipalities enumerated above will be required to keep a health officer of the first class, and all others with an annual income of Rs.50,000 and upwards to keep a health officer of the second class. The officers of the first class

must have a registrable medical qualification and a British diploma in public health. For those of the second class the main qualification will be a good general education, together with the personal qualities of tact and energy. The general educational qualification will be either the school-leaving certificate with chemistry or a university entrance examination with chemistry. It will also be necessary for these officers to possess the certificate for a new sanitary course which will be opened at King George's Medical College, Lucknow, next autumn. Special arrangements will have to be made to meet the case of men who are already employed as health officers. It will be necessary to decide whether they have sufficient general education besides personal qualities to justify the experiment of sending them up for the special sanitary course at the new college. A period of three years will be allowed to enable municipal boards which are required to keep an officer of the second class to get their present officers trained or to obtain new men. It has also been decided after careful consideration that the health officers should be formed into a provincial service. There was some difference of opinion upon this point amongst the officers consulted, and also between the members of the sanitary conference. The opinion of the majority of the conference, however, was that in order to secure men of the proper stamp it was necessary that the tenure of their appointments should be reasonably secure, and that appointment and dismissal should lie with Government, due regard being paid to local representations. As a safeguard against any want of consideration of local opinion it was recommended that these officers should not be confirmed in their appointments until approved by the local authority, the Commissioner, and the Sanitary Commissioner of the Province. The Lieutenant-Governor of the United Provinces has accepted these views and intends to give effect to them.

In addition to the importance of providing security of tenure, which in the case of such a service can hardly be overrated, there are obvious advantages in a provincial service which provides graded pay and a regular scheme of promotion. In view of the fact that the municipal board of Cawnpore has already found it necessary to appoint a health officer at a salary of Rs.450 to Rs.750 (£30–£50) per mensem it has been decided to fix the pay of the health officers of Lucknow, Benares, and Cawnpore, each of which has a population of about 200,000 or above, at Rs.450-20-750. The health officers of Agra, Allahabad, Bareilly, and Meerut will receive a salary of Rs.300-20-500 (£20–£33 6*s.* 8*d.*) per mensem. All health officers of the first class will be eligible for promotion to the new class of Deputy Sanitary Commissioner, if otherwise qualified. Health officers of the second class will receive a pay of Rs.150–10–300 (£10–£20) per mensem. In neither class will the rates above be necessarily given until properly qualified men are available. All municipal health officers will be debarred from private practice.

When qualified health officers are appointed to the provincial service municipalities will as a general rule be called upon to provide half their pay. The Government of India has generously promised a contribution which will meet the remaining half. The service will be non-pensionable, but the municipal boards will be requested to allow these officers to contribute to the municipal provident funds. On transfer taking place the amount standing to the credit of an officer in the fund will be transferred. In the case of existing health officers who are to be sent for training in the special sanitary course the Government hopes to be able to meet the whole cost of training, which would include the salary they are drawing in their existing appointments, together with any horse allowance which may have been granted. They will be exempted for the payment of fees for the courses of instruction. The details connected with the system of control of the new service have not yet been decided on, and orders on this point will be notified later. Allied to the formation of a service of health officers the important question of the improvement of the subordinate supervising staff of the conservancy establishment has not been lost sight of. This subject was thoroughly considered by the Sanitary Conference of September, 1908.

The conclusion of the conference was that no high educational qualifications were required for such men, but rather tact and practical ability in getting good work out of inferior castes and a capacity for undergoing a certain amount of actual physical labour. At the same time the conference recommended that all persons appointed as sanitary inspectors should have gone through a prescribed practical course under selected medical officers of health in the large towns and must produce a certificate of efficiency from the Sanitary Commissioner. The conference suggested the following scheme for administering the subordinate staff.

A town with a population of 100,000 should be divided into four or five sanitary divisions, for each of which there should be one conservancy inspector with an adequate subordinate staff. There should be one chief or trained inspector in general charge of all the divisions. Another chief inspector should be appointed for every additional 100,000 of the population and additional inspectors on a similar scale, so that a town of 200,000 inhabitants would have two chief inspectors and eight or ten inspectors. The pay of a chief inspector, it was suggested, should be fixed at Rs.75 to Rs.100 (£5–£6 13*s.* 4*d.*) per mensem. In the case of the smaller towns the conference took as the basis of their recommendations the ordinary and annual income, municipalities with an income of Rs. 50,000 or upwards being required to employ at least one trained inspector on Rs.50 to Rs.75 (£3 6*s.* 8*d.* to £5) per mensem in addition to the health officer, while in municipalities with an income from Rs.20,000 to Rs.50,000 there would be one trained inspector on from Rs.50 to Rs.75. In both these classes and in towns with an income of less than Rs.20,000 a minimum standard of one conservancy sub-inspector per 20,000 of the population was laid down.

This scheme was accepted by the Local Government and reported for the approval of the Government of India. The latter has recently communicated its decision and leaves it entirely to the discretion of the Lieutenant-Governor to prescribe the standard of staff to be laid down for each class of municipality, the qualifications required, and the pay to be given.

Sir John Hewett states that he considers that the time has now come to take steps to introduce the scheme described above. The desirability of strengthening the supervising staff will hardly be questioned, but the financial aspect requires examination, and for this purpose all municipal boards have been requested to report through commissioners of divisions what their conservancy supervising staff is at present, giving the number of posts and the rates of pay, and also whether they are able to find the money required to introduce the new scale. Where health officers are already employed there should be no difficulty in providing the necessary funds, as it has been decided that half the pay of the health officers will be met by Government, and the boards will, therefore, be relieved of some part of their existing expenditure. In other cases, if assistance is needed, full reasons must be given in justification of a request for help. It is not intended to require all boards to employ trained men within a given period, but after the lapse of three years from April 1st, 1912, no board will be permitted to appoint a new conservancy inspector who has not obtained the certificate to which allusion has already been made. Inquiries are being made separately on various points connected with the inauguration of the scheme, the main principles of which have been indicated.

Sanitary Progress in Bombay.

At the present time (as for many years past) the honour of second place in regard to population among the cities of the Empire is held by Bombay, whose councillors and citizens have recently been considering important measures for the improvement of the public health and municipal well-being. Some months ago Dr. C. A. Bentley's exhaustive report on the severe prevalence of malarial fever in some parts of the city was noticed in THE LANCET. This report has been approved, and action is being taken by a committee of the corporation. Dr. J. A. Turner, the health officer, has made a new departure in tropical public health administration in taking up the matter of medical inspection of school children. This has been in operation at home since 1908, but has not, as far as is known, been carried out in any of our tropical dependencies up to the present. Dr. Turner has no difficulty in showing that such a measure must be doubly valuable in India, where the control of infectious diseases, especially tuberculosis and malaria, in schools would be of immense benefit to the public health generally. In Bombay there are

some 38,000 children attending school whose health and physical condition would be benefited by the adoption of school medical inspection, besides some 74,000 children who do not attend school, and therefore would not at present come under the scheme. He does not advocate any sweeping reforms, but would gradually adopt a scheme that might lay the foundation for future development, estimating that a beginning could be made at a cost of about 6*d.* per head. The Bombay Government has proposed that a School of Tropical Medicine should be established in connexion with the King Edward Memorial Hospital that is intended to be erected at Parel, a northern suburb of Bombay, where for many years past the central research laboratory for plague has been carrying on a most valuable work. It is proposed that this institution should be developed and associated with the medical school of the new hospital, which will contain 100 beds. The Bombay Government would undertake the cost of construction, maintenance being provided by the corporation. This matter has been referred to a committee of the corporation for consideration. Since 1892 Bombay has enjoyed the advantage of an excellent water-supply, derived from the Ghâts about 60 miles to the north-east of the city, where the great dam enclosing the watershed of the Tansa river, one of the greatest engineering works of modern times, holds up a body of water capable of supplying more than 30,000,000 gallons daily. Together with subsidiary sources, this has allowed of a supply of 38 gallons per head per day, at present, however, reduced to 31½ gallons on account of increase in the population; of this quantity, about 18½ gallons is received for domestic purposes. With the more extended use of water that has accompanied a generally heightened sense of sanitary requirements, Bombay is again in need of an augmented supply,[1] and the authorities, in devising measures for increasing the catchment area available at Tansa, have decided that it is better to remove all possible sources of pollution rather than permit pollution and dilute it by filtration afterwards. The question of waste has been carefully considered. Water-waste meters are in use with excellent results, the percentage of waste having been reduced from 28·3 in 1906 to 8·0 per cent. in 1910. The chief causes are, as usual, defective fittings, and amongst the poorer classes negligence and misuse of water. It is intended still further to prevent waste by enforcing better plumbing. The supply will be on the constant, instead of as at present on the intermittent, system. When this has been accomplished a water-carriage system of sewage removal will, it is hoped, come into general use. More than 80 per cent. of the population reside in an area that is provided with sewers, but only one-fifth of them have water-closets, the remainder using privies. It is hoped that this matter will receive early attention. Tuberculosis has been generally considered to be a disease rather of temperate than of tropical climates, but in Bombay the death-rate in 1909 was 2·92 per 1000, a higher rate than in Glasgow or Manchester, or in Calcutta (2·5 per 1000). A philanthropic citizen, Mr. Ratan Tata, has promised 15,000 rupees a year for ten years to support a campaign against this disease; and now an Antituberculosis League has been started at a public meeting presided over by His Excellency the Governor. Dr. Turner outlined a scheme to include educational work, preventive measures, home treatment, the provision of sanatorium treatment, a hospital for advanced cases, and the systematic use of tuberculin. Compulsory notification of the disease already exists in Bombay. The proposals were received with enthusiasm, and the formation of an antituberculosis league was decided on. Your readers will see that Bombay is carrying out an enlightened public health policy with energy, and worthily upholding its position as the second city in the British Empire.

[1] THE LANCET, April 6th, 1912, p. 960.

EXETER AND THE ROYAL SANITARY INSTITUTE.—At the meeting of the Exeter city council, held on May 29th, under the presidency of the mayor, Dr. C. J. Vlieland, it was unanimously resolved to invite the Royal Sanitary Institute to hold its annual meeting in Exeter in July, 1913. It was stated that if the Royal Sanitary Institute was invited to Exeter the secretary had intimated that the invitation would be accepted.

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Antituberculosis Exhibition in Birmingham.

THE arrangements for this exhibition, which will be held in the town hall, kindly lent by the Lord Mayor, from July 3rd to 17th, are now well advanced. Besides the general exhibits there will be much of a local interest. Lectures illustrated by limelight views will be given each evening by leading medical men. Addresses will be given in as many meetings as possible by medical men on Sunday, July 7th. The Midland Adult School Union is also taking part in the campaign by distributing literature and arranging for talks on consumption in the schools on July 7th. In this way it is hoped that several thousand men and women will get instruction in the simple facts about tuberculosis and be attracted to the exhibition.

Anti-Spitting By-law.

The first prosecution in Birmingham under the by-law against spitting was heard at the Birmingham police-court on May 24th. Birmingham was the first city to obtain such a by-law and it came into operation in September, 1911. The defendant had been a patient in Yardley-road Sanatorium and had been instructed in the dangers of spitting. At the time he was observed by the tuberculosis inspector to be spitting on the pavement he was actually on the way to the tuberculosis dispensary and had with him a sputum flask. Defendant was find 5*s.* without costs.

Care of the Feeble-minded.

A noteworthy report was presented by Mrs. Hume Pinsent, chairman of the special schools subcommittee, to the Birmingham education committee on May 24th. The report recommended that, subject to the approval of the city council and the Board of Education, the Birmingham board of guardians be asked to provide at Monyhull residential school accommodation for epileptic and mentally defective children to be sent there by the education committee. The scheme is the result of ten years' investigation, and by it provision is made more efficacious and economical. The necessity for it arises from the fact that the guardians are becoming responsible for certain mentally defective children and have no place to send them except the workhouse, and that the education committee are responsible for certain other children and have no residential school to which to send them. Obviously the provision of two schools by two bodies for the same class of children would be extravagant. Until the Greater Birmingham Act was passed there were certain legal difficulties in the way of the scheme, but these were overcome by the introduction of an enabling clause in the Act giving the necessary power. The Local Government Board and Board of Education have approved the scheme and are doing their best to help the committee to proceed with the plan. The guardians already have a convenient site at Monyhull, near King's Norton. The schools will be managed by a joint committee of the guardians and education committee, and each section will pay the exact cost of what they received. The beauty of the scheme is that there never need be the disheartening discharge at the age of 16 as there is from the day school. The children will be able to pass from one side of the colony to the adult homes. To let the children become vicious before sending them to the colony is to create both trouble and expense. All the cases will be under medical observation, and no case will be detained after the age of 16 without a proper certificate from medical men and probably the magistrates.

June 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Royal Cancer Hospital.

THE formal opening of the new Glasgow Cancer Hospital took place last week, when the ceremony was performed by the Duchess of Argyll. The ceremony aroused considerable interest, and a large and representative gathering of citizens was present. The first words of Her Royal Highness were to announce that the King had been

graciously pleased to direct that the hospital would be hereafter designated "The Glasgow Royal Cancer Hospital." The Duke of Argyll, who made acknowledgment on behalf of the Princess Louise at the close of the afternoon, referred to the ravages of the disease, particularly among the cotters in the West Highlands and people in other parts of rural Scotland, and to the old belief that the disease was caused by a too consistent fish diet. He contrasted the better lot of the patients in such a hospital, where in addition to expert surgical and medical skill they would have the advantage of a good dietary.

Aberdeen Dispensary and Maternity Hospital.

A special meeting of the managers and subscribers of the Aberdeen Dispensary, Maternity Hospital, and Vaccine Institution was held on May 27th, when the report from the Committee of Management on the proposed separation of the Maternity Hospital from the Dispensary and Vaccine Institution was read. The report stated that after full consideration of the present position of the dispensary, the committee unanimously recommended to the managers that the Maternity Hospital should be discontinued as a branch, and carried on as a separate institution under the name of the Aberdeen Maternity Hospital, on the lines of the constitution prepared by the committee. The committee was of opinion that by separating the hospital public interest in it would be stimulated and more adequate support obtained. The Lord Provost approved the report, and moved that the Maternity Hospital be henceforth separated from the dispensary. In doing so he said that they were moving contrary to the spirit of the times in separating these institutions. Amalgamation and conjunction were more striven after at the present time, but in the particular case disjunction seemed to hold out the only hope that these two very valuable institutions could be carried on in the future successfully. Both had done during a long number of years valuable work in the city, not only to the poor, but as a training ground for students and nurses. For a number of years, unfortunately, the loss had ranged annually on the working of the institutions from £1000 to £1200, the present debt being £4600. He did not think there was any reason why they should be specially discouraged at the deficit. From Dr. Matthew Hay he learned that in Glasgow, Edinburgh, and Birmingham things were no better than in Aberdeen, and that although people valued the existence of these institutions they were not prepared, as yet at any rate, to give them adequate support. From private individuals, trusts, and the town council they were promised aid to help in the reduction of the debt, and he trusted that if they were able to show that they had put the institutions on a sound financial basis with reasonable hope of future soundness, more aid would be forthcoming. The dispensary buildings could be put in efficient order for a moderate sum; the maternity buildings were practically new, well equipped, and suitable for their purpose. One reason for disjunction of the institutions was that they had promises of assistance for the dispensary on condition that in future it should stand upon its own footing, and having carefully gone into the probable income and expenditure he thought they could hope that the dispensary would now be in a condition to be run with practically no deficiency. With regard to the Maternity Hospital the position was different. While certain possible arrangements, when carried out, would much decrease the deficiency, there was still a great deal to do before the Maternity Hospital could be run without loss. It was afterwards moved and the resolution was carried:—

That the committee of management be empowered to enter into an agreement with the Maternity Hospital in the event of the same being carried on as a separate institution for an equitable division of the heritable and other properties belonging to the Aberdeen Dispensary, Maternity Hospital, and Vaccine Institution, as the same existed before its disjunction, and also of the debts and obligations affecting the same, and that the trustees in whom the heritable properties are invested be directed to execute such conveyance of other deeds as may be necessary to carry out the agreement to be entered into by the committee of management.

It was also agreed that the hours of attendance at the dispensary by students should be from 9 to 10 instead of from 10 to 11. The resolution was moved and carried, and the first board of directors was appointed.

Consumptives and Removals.

Dr. Matthew Hay, medical officer of health of Aberdeen, has written to the newspapers asking that the public health department should be informed at each term of the vacation of any house by a family in which there was a consumptive member, in order that proper disinfection may be carried out by the department.

June 3rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

The Insurance Act and the Teaching of Practical Midwifery.

THE following resolution of the Faculty of Medicine of the Queen's University, Belfast, was unanimously adopted at a meeting held on May 28th:—

That the Medical Faculty of the Queen's University of Belfast beg to draw the attention of the General Council of Medical Education and Registration of the United Kingdom to the fact that unless alterations are made in the National Insurance Act in reference to maternity hospitals, it will be impossible in the future to carry out the suggestions passed in 1907 by the General Medical Council in regard to practical midwifery, and which were adopted in full by the Queen's University of Belfast in their medical curriculum.

Under the Act, a woman is deprived of "maternity benefit" if she is confined in a lying-in hospital, and payment of this benefit depends upon her being attended either by a duly qualified medical practitioner or by a duly certified midwife. Consequently, whether an intern or an extern patient of a lying-in hospital, she will lose her "maternity benefit"; hence women (whether they are insured themselves or are the wives of insured persons) will naturally avoid maternities, with the indirect result that neither the midwife nor the medical man of the future will be able to acquire proper practical skill and experience.

The Medical Faculty of the Queen's University of Belfast would therefore respectfully urge the General Medical Council, in the interests of medical education, to take immediate action so as to safeguard the interests of such important educational institutions as maternities.

In the year 1905 the Students' Practical Midwifery Committee of the General Medical Council sent to the various medical teaching bodies a series of questions bearing upon the better training of students in practical midwifery, and in May, 1906, issued a report on the question of the operation of the rules regarding midwifery practice required of candidates for medical qualifications. In 1907 the General Medical Council made recommendations[1] in regard to practical midwifery. When the curriculum of the new Queen's University of Belfast was being arranged these suggestions of the General Medical Council were adopted in full and made compulsory on students as follows:—

Every student shall be required either—(*a*) To have regularly attended the indoor practice of a lying-in hospital or the lying-in wards of a general hospital for a period of three months; and after having received therein practical instruction in the conduct of labour, under the personal supervision of a medical officer, to have conducted twenty cases of labour under official medical supervision; or (*b*) To have conducted not less than twenty cases of labour, subject to the following conditions:—

That he has during one month given regular daily attendance upon the indoor practice of a lying-in hospital, or the lying-in wards of a general hospital or Poor-law infirmary, having a resident medical officer recognised for that purpose by the University; and that he has therein conducted cases of labour under the personal supervision of a medical officer of the hospital, who shall, when satisfied of the student's competence, authorise him to conduct outdoor cases under official medical supervision.

No certificate that the student has conducted the above-mentioned twenty cases of labour shall be accepted unless it is given by a member of the staff of a lying-in hospital, or of the maternity charity of a general hospital, or of a dispensary having an obstetric staff recognised for that purpose by the University, or of a Poor-law infirmary having a resident medical officer so recognised.

Every student before commencing the study of practical midwifery shall be required to have held the offices of clinical medical clerk and surgical dresser, and to have attended a course of lectures on surgery and midwifery.

There is now at the final M.B. degree a clinical examination in midwifery, gynæcology, and diseases of children. Unless, however, the clauses in the present Insurance Act bearing upon "maternity" benefits be altered, it will be impossible to fulfil these conditions laid down by the General Medical Council, and hence the medical faculty of the Belfast University has requested that body to urge that such clauses be changed. The first difficulty—i.e., in relation to the intern maternity—might be met by making it clear to the poor that the money ("maternity" benefit) will in all cases be paid to the woman's or her husband's dependents under Section 12 (2) (*a*) of the Act; while the second objection—in reference to the extern department of a lying-in hospital—might be obviated by arranging that women attended by medical students or pupil midwives of a recognised maternity, under

[1] THE LANCET, June 8th, 1907, p. 1593.

the direct supervision of the resident medical officer of the hospital, who in turn can command, if needed, the services of the visiting medical staff, shall be regarded, for the purposes of the Act, as having been attended by a registered medical practitioner.

Elections at the Royal College of Surgeons.

The annual election of President, Vice-President, Secretary, and Council of the Royal College of Surgeons in Ireland was held on Monday last, and resulted as follows: President: Mr. Richard D. Purefoy. Vice-President: Mr. F. Conway Dwyer. Secretary: Sir Charles A. Cameron, C.B. Council: Mr. R. H. Woods, Sir John Lentaigne, Sir Henry R. Swanzy, Sir Arthur Chance, Sir Charles B. Ball, Sir Thomas Myles, Mr. R. Lane Joynt, Mr. E. H. Taylor, Mr. W. I. Wheeler, Mr. W. Stoker, Mr. H. G. Sherlock, Mr. A. Blayney, Mr. F. T. Porter Newell, Mr. R. C. B. Maunsell, Sir Lambert Ormsby, Mr. Wm. Taylor, Mr. Trevor N. Smith, Mr. R. Bolton McCausland. The election of Mr. Purefoy, Vice-President for the past two years, as President was unanimous. The new President is a well-known obstetrician, and a Past Master of the Rotunda Hospital. The Vice-Presidency was keenly contested, Mr. Dwyer receiving 174 votes as against 168 cast for Mr. J. B. Story. Mr. Dwyer is surgeon to the House of Industry Hospitals and professor of surgery in the school of the College.

Buildings for University College, Dublin.

Though it is four years since the passing of the Universities Act, University College, Dublin, is still without suitable housing. Its classes, indeed, are held in three separate buildings, at considerable distances apart. There has been a good deal of discussion as to a suitable position, and the idea of a country site on the outskirts of Dublin, where playing-fields would be available, has received much support. After full deliberation, however, the governing body has decided to build on the site generously placed at the disposal of the College by Lord Iveagh, adjacent to the old premises of the Royal University, which have come into the possession of the College. The sum at present available is £110,000, but further private benefactions will be required. The governing body has invited architects to submit designs.

Irish Medical Association.

The annual meeting of the Irish Medical Association is to be held at the Royal College of Surgeons, Dublin, on Wednesday next. Mr. R. H. Woods, the outgoing President of the Royal College of Surgeons in Ireland, has been nominated as President of the Association. The report of the Council of the Association states that the membership on Dec. 31st, 1911, was 577. Sixteen members died during the year, 17 resigned, and 38 names were removed for failure to pay the subscription. Forty new members were elected. The Association has a credit balance of £605 4*s.* 6*d.*

Consultations with Poor-law Medical Officers.

For some years past the Local Government Board has been exerting itself to persuade boards of guardians to adopt scales of fees to which they will adhere in cases of consultation with Poor-law medical officers and other special medical services. In many instances boards of guardians have adopted such scales without any agreement with the medical profession of the district, and they attempt to impose them not only on Poor-law medical officers but on independent practitioners. An instance of this kind is recently reported from Sligo. Dr. E. C. MacDowel, of Sligo, who is not in the Poor-law service, was summoned in consultation by a Poor-law medical officer seven miles away. In due course he sent in a bill for 10 guineas. The guardians offered 1 guinea, being the sum fixed by their scale, which he refused to accept. The matter was referred to the Local Government Board, who replied that the scale applied to all medical men who accepted consultations in Poor-law cases. The result of such an attempt to dictate to independent members of the profession is that medical men who value their own services will refuse to give help in Poor-law cases.

Ulster Medical Society.

At a meeting of the Ulster Medical Society held on May 28th, Dr. H. L. McKisack, the President, being in the chair, Sir Almroth Wright was elected an honorary Fellow of the society. In the absence of Dr. J. E. MacIlwaine, the honorary secretary, Dr. J. C. Rankin, read his paper on Pipette Analysis. Dr. T. Houston read a paper on a series of cases of Septicæmia Simulating other Diseases. He also gave an account of three cases of "rat-bite" fever, in which culture experiments proved negative. Dr. W. Calwell showed a specimen of Infective Endocarditis, and Dr. A. Fullerton exhibited a case of Tarsectomy. On the evening of May 30th Sir Almroth Wright was entertained at dinner by the society.

Sir Almroth Wright in Belfast.

On May 30th Sir Almroth Wright was presented with the freedom of the city of Belfast "in recognition of his distinguished services to the world by which he has revolutionised the treatment of disease." The formal presentation of the illuminated certificate of citizenship took place at a luncheon given in the City Hall, Belfast, by the Lord Mayor of the city (Mr. R. J. McMordie, M.P.), the certificate being enclosed in a silver casket richly decorated with raised work. The other recipients of the honorary freedom of Belfast on the same occasion were the Hon. Whitelaw Reid, American Ambassador to St. James's; Sir Joseph Larmor, M.P.; and Sir James Henderson, an ex-Lord Mayor of the city.

Presentations to Dr. J. Walton Browne.

On May 31st Dr. John Walton Browne, who has recently retired from the position of the senior surgeonship of the Royal Victoria Hospital, Belfast, was the recipient of a series of gifts of a most gratifying nature. The visiting staff of the hospital presented him with a silver rose-bowl and two silver loving-cups, as well as an illuminated scroll containing a very complimentary resolution passed by them on his retirement, while the auxiliary staff gave him a gold cigarette case, the resident medical officers having previously presented him with a gold sovereign case.

Belfast Milk-supply.

An inquiry is to be held in the City Hall, Belfast, on June 25th in reference to an application made by the Belfast Corporation for an order, under the Tuberculosis Prevention Act, 1908, giving them power to inspect the dairies in certain districts which supply milk within the borough boundary. The places affected have been notified by the Local Government Board, so as to enable them to send witnesses if they wish.

Death of Dr. Henry Whitaker.

The death occurred, at the advanced age of 79, of Dr. Henry Whitaker, at his residence, Antrim House, Belfast, on June 3rd, after a tedious illness. The son of a merchant in Belfast, he was born in that city in 1833. He entered Queen's College in 1854, after being trained at a pharmaceutical establishment. He graduated in medicine at the old Queen's University in 1859, and after practising for a brief space in Dublin settled down in Belfast in partnership with the late Mr. W. J. Wheeler. He early entered the city council, where he rose to be an alderman, and in 1890 was appointed medical superintendent officer of health of Belfast, a post he held until his resignation in 1906.

June 4th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Value of Antituberculosis Therapeutic Measures.

AT the Academy of Medicine on May 21st M. Louis Rénon said that although the therapy of tuberculosis had made considerable progress in recent years, it seemed for the present at a standstill. Antituberculosis serum-therapy had not fulfilled its promises; it was uncertain in its effects, which were satisfactory in only a fourth or a fifth of the cases of acute febrile tuberculosis. Tuberculin could not be used therapeutically in all tuberculous cases without danger. Practically, the indications were confined to apyretic cases where the lesions were stationary; such cases frequently terminated satisfactorily. The basis of antituberculous treatment still consisted of the old therapeutic methods of open air, unsystematised rest, and non-exclusive diet, reinforced by remineralisation and recalcification, chemotherapy, crenotherapy, heliotherapy and "collapsotherapy." If progress was to be made it was necessary to strike out new paths. The future probably lay in the discovery of spontaneous natural methods of antituberculous vaccination and in physical chemistry, which,

with the catalytic, proteolytic, and lipasic activities of the ferments and with the mechanical effects and adsorptive phenomena of the colloids, are very powerful.

The Ancient Inhabitants of Paris.

Dr. Capitan, in a conference organised by the *Amis de Paris*, has traced the beginnings of the Parisian. Formerly, before the earth was inhabited, the ground now occupied by Paris was entirely flat and situated at a higher elevation. As the water-courses hollowed out their beds the hills and valleys were formed, such as they are to-day, and the earliest inhabitant of Paris made his appearance. The temperature was tropical and the fauna and flora resembled those of Central Africa. The Parisian of those days was essentially carnivorous, and made use of special implements of stone to kill animals. Next man made use of knives characteristically fashioned from flint. The Parisian of that day had very prominent supraciliary arches, and resembled the very lowest of the Australian races, being of a poor order of intelligence. This state of man lasted a long while without any improvement, but at the glacial epoch the Parisians made great progress and improved their implements. They lived at this epoch among mammoths and furry rhinoceroses. After alternating periods of heat and cold had passed over the Parisian terrain the race of huge animals disappeared, and with the present fauna and flora appeared the neolithic man. There is in the environs of Paris the site of a neolithic village of huts similar to those still used by certain red-skinned races. The people of that time made pottery, used cereals, and constructed menhirs such as are found to-day at Clamart, near Paris. Next appeared travelling merchants, bringing bronze objects probably from the East, and arms for the chase and war, bringing us to the prehistoric stage, the last epoch before the present.

Antityphoid Vaccination.

On May 14th M. Vincent demonstrated at the Academy of Medicine the results in more than 5000 vaccinations with polyvalent vaccine (bacillar and autolytic). Requests for his vaccine, both from France and abroad, have been made on behalf of more than 35,000 persons. Among the numerous vaccinations with the polyvalent vaccine sterilised by ether there have been no accidents. The vaccine procured by autolysis is the least painful and the best tolerated. The other antityphoid vaccines are more painful; in the Japanese army 38 per cent. of those vaccinated had severe and even violent reactions. Experimentally, M. Vincent showed that sensitised living bacilli induce in animals a very powerful immunity, but prudence does not permit of the application to man of the results of these experiments. M. Vincent considered it preferable to seek a vaccine which, by its method of preparation, should possess all the properties of living bacilli without their dangers. He claims that his polyvalent vaccine answers these requirements. It can be used without any risk during an epidemic; if it is injected into subjects during the incubation period, not only is the ensuing fever not aggravated, but it follows a benign course. To numerous examples of prophylaxis M. Vincent added two very remarkable cases of protection from laboratory infection due to the accidental ingestion of cultures of the bacillus of Eberth—the first that of a medical man who had been vaccinated four months previously, and the second that of a student who received the injection 24 hours after the accident and escaped the disease. The protection assured by antityphoid vaccination in soldiers vaccinated in Morocco in August, 1911, has since remained operative, for under like conditions not one of them was attacked with typhoid fever, while 14 per cent. of the non-vaccinated were attacked. Moreover, almost all the unvaccinated have asked for the prophylactic injection.

The Police, the Bench, and the Assistance Publique.

An incident bearing on the question of professional secrecy among the directors of hospitals has provoked an administrative conflict between the Assistance Publique, the Bench, and the Prefecture of Police. An infant a few days old was found, deserted apparently by a woman who had just left an obstetrical clinic. Three of these establishments being situated in the quarter where the desertion occurred, the Commissary of Police requested permission to inspect their registers of the afternoon departures. His request was refused, the directors standing on their obligation to professional secrecy. The Commissary made it clear that the matter concerned a crime committed outside the hospital and that the information required had nothing to do with the disease affecting the person sought, but all his efforts were in vain. The bench, on being informed of the matter, which came within its jurisdiction, ordered a magistrate to obtain the needed information, but this, too, proved unavailing. Moreover, after all these delays the mother had probably escaped and found a safe hiding place. As such conflicts are of frequent occurrence between the police and the Assistance Publique, the Minister of the Interior is to be informed of the facts and asked to lay down some definite instructions for future guidance.

Bicarbonate of Soda and Œdema in Diabetes.

On May 10th M. Labbé and M. Bith, in a communication to the Société Médicale, pointed out that emaciated diabetics when treated with bicarbonate of soda often become œdematous, the body weight increasing together with the onset of the œdema. According to M. Widal, bicarbonate of soda prevents the elimination of sodium chloride. M. Labbé thought that the retention of chlorides was inconstant and could not of itself explain all the bicarbonate œdemas occurring in diabetics. M. Achard also had noticed the augmentation of weight accompanying the administration of bicarbonate of soda. The sodium in these cases was eliminated with little difficulty, but the contrary was the case with the chlorides.

June 3rd.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Locum Tenents for Regular and Sunday Practice.

THE association known as the "Medical Organisation" for the province of Lower Austria, excluding Vienna, has recently proposed a scheme designed to enable its members to obtain the services of locum-tenents without difficulty and at once. This has hitherto been sometimes very difficult, as there is, in this country at least, a scarcity of practitioners willing to undertake such duties. The plan is as follows. Five fully qualified medical men between 25 and 35 years of age will be engaged by the organisation and will receive a fixed salary of 200 kronen per month, whether their services are needed or not. They would be under an obligation to be ready at a day's notice to go to any part of the province as substitutes for practitioners who for any reason require a locum-tenent; they would be paid their travelling expenses both ways, would have free board and lodging, together with a certain percentage of the receipts of the practice, and would have preference in the event of a position as district medical officer becoming vacant. Five such substitutes, each of them successively relieving some of their professional brethren for a period of four weeks during the year, would enable a number of busy practitioners to take a month's holiday—a thing at present hardly possible with us. A similar arrangement is now contemplated in Vienna as regards practice on Sundays. There would be no difficulty in finding a number of young medical men willing to spend Sunday in acting as substitutes for the older practitioners, who would thereby be able to have a day of rest each week, whilst their patients would be looked after. Here also a division of the city into districts is proposed, so that the scheme may be worked on a large scale. Of course, the practitioners would also have to receive definite remuneration for undertaking to give their services when required, in addition to any participation in the net earnings.

The Vienna Polyclinic.

That well-known institution the Vienna Polyclinic celebrated a few days ago the fortieth anniversary of its foundation, a special meeting of the members of the board of management and their friends being held in honour of the occasion. During the first few years of its existence the Polyclinic had to encounter some hostility, both direct and indirect, proceeding from various quarters, but these difficulties were eventually surmounted and nobody now questions the importance of the Polyclinic, both from the point of clinical teaching and of public utility. When in the year 1872 several well-known specialists combined their efforts in order to create the Polyclinic, it was merely a dispensary for out-patients, but as by degrees it grew, it

became recognised by the profession as an aid in post-graduate teaching, and a hospital, which now has 150 beds, was attached to it. Funds, however, have always been lacking, and the financial position of the institution is still far from satisfactory. Whilst in 1872 not more than 12,000 patients received attention, the number last year increased to over 80,000, and the number of patients seen for the first time by the medical staff since the foundation of the institution is over 1,800,000. Last year there were 2720 in-patients, on whom over 1300 major operations were performed. The Polyclinic is, in fact, a complete hospital and medical school, which comprises all medical branches, including the latest developments of specialism. The heads of the various departments are chosen from amongst the professors and the *privat-docenten* of the Vienna faculty, and conversely vacant professorships in the clinics are very often given to the teachers of the Polyclinic. At present there are numerous classes in which English is the language and in which many English-speaking medical men are regular attendants. This coöperation between the General Hospital and the Polyclinic much increases the teaching opportunities in Vienna.

Salvarsan.

Professor von Zeissl, who has had ample opportunity of studying the effects of Professor Ehrlich's remedy against syphilis, has just published the results of his experience since July, 1910. Writing to the *Medicinische Wochenschrift*, he stated that he had closely watched its effects in 294 cases. He gave either intramuscular or intravenous injections, preferably the latter, as they were hardly ever painful and interfered less with the patient's regular work. Professor von Zeissl repeated the intravenous injections three or four times within five or six weeks, using mostly half a gramme of salvarsan in a solution prepared with freshly distilled water. In 22 cases which came to him in a very early stage, but which already showed a positive Wassermann reaction, he succeeded in bringing about what he believed to be a radical recovery, for the blood subsequently gave a regular reaction on every occasion and no manifestations of recurrence were seen. He never observed any marked disturbances in connexion with the nervous system; an affection of the vestibular and cochlear nerves has often been described by others as a consequence of the administration of salvarsan, but he considered this to be a manifestation of syphilis itself. In his experience gummatous conditions cleared up very rapidly under the use of this remedy, and much better than under mercury, but in severe skin eruptions such as psoriasis palmaris or plantaris the older methods in combination with the salvarsan treatment were indispensable. Professor von Zeissl believes that salvarsan is a very important addition to the list of therapeutic substances, and that although not likely to supersede the old methods entirely it will nevertheless be of great benefit to mankind if employed with due precautions as regards asepsis.

June 1st.

THE NATIONAL BUREAU FOR PROMOTING THE GENERAL WELFARE OF THE DEAF.—Dr. James Kerr Love will give two lectures at the Royal Sanitary Institute, 90, Buckingham Palace-road, S.W. The first lecture, on Tuesday, June 11th, at 5.30 P.M., will be on the Nature and Consequences of Deafness (to be illustrated by lantern slides). The date of the second lecture on the Classification of Deafness and the Prevention of Acquired Deafness will be announced later.

THE SHEPTON MALLET (SOMERSET) BOARD OF GUARDIANS AND VACCINATION.—The decrease in the number of vaccinations in the West of England is disquieting, and at the meeting of the Shepton Mallet board of guardians the Rev. P. H. Milne referred to the subject and moved a resolution urging the necessity for vaccination. In the course of an interesting speech he discussed the large percentage of deaths from small-pox in the unvaccinated and the small percentage in vaccinated cases, adding that an unvaccinated child was a danger to the whole community. Mr. Milne concluded by saying: "If an epidemic of small-pox occurred now, Gold help us." After some discussion the resolution was carried.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, JUNE 4TH.

THE General Council of Medical Education and Registration commenced its summer session at its offices, 299, Oxford-street, W., to-day. Sir DONALD MACALISTER, the President, was in the chair.

New Members.

The following new members took their seats on the Council:—Dr. John Theodore Cash, as Representative of the University of Aberdeen (introduced by Sir Thomas Fraser); Dr. James Lorrain Smith, as Representative of the Victoria University of Manchester (introduced by Dr. Caton); Dr. George Alexander Gibson, as Representative of the Royal College of Physicians of Edinburgh (introduced by Mr. Hodsdon); Dr. David Hepburn, as Representative of the University of Wales (introduced by Dr. Latimer); and Mr. Thomas Jenner Verrall, as a Direct Representative for England (introduced by Dr. MacDonald).

The President's Address.

The PRESIDENT then delivered his address. He said: As on previous occasions, I have at the opening of this Ninety-fifth Session to begin my address with *Ave atque vale*. Our senior member, Sir John Batty Tuke, has retired after a quarter of a century of distinguished service; and another member, who joined us but three years ago, has suddenly passed away in the midst of his varied and important activities. Only those who, like myself, are among the seniors can fully appraise the value of Sir John Tuke's contributions to the educational and professional advances we have made during the last 25 years; but all alike have recognised his devotion to the public purposes for which the Council exists, and have been helped by his mature and independent judgment on questions of policy or practice. The qualities that marked him for eminence in professional life he freely applied to the business of the Council, and more than one department of its work was developed under his direction. The cordial good wishes of his colleagues will follow him in his well-earned retirement.

By the death of Dr. Dixon Mann the Victoria University of Manchester loses an able and energetic teacher, the profession an acknowledged authority on medico-legal problems, and the Council a member of wide experience and forceful intellect. We remain his debtors for the part he took in remodelling the regulations for qualifications in Public Health, and share with many in unavailing regret for the untimely interruption of his services to medicine and the State. In his place we welcome Dr. Lorrain Smith, F.R.S. The field of his professional experience, which includes England, Scotland, and Ireland, fits him in a special degree for effective membership of this Council of the United Kingdom. From Edinburgh, in the room of Sir John Tuke, we receive Dr. G. A. Gibson, formerly an inspector of examinations on the Council's behalf, a graduate of numerous universities on both sides of the Atlantic, and a leader in medical science and practice on both sides of the Border. He will find that his name is already familiar to the Council. The University of Wales, in virtue of a recent Act of Parliament, has appointed Professor Hepburn, Dean of the Medical Faculty at Cardiff, to be its first representative. The Council has already noted with satisfaction that the University of Wales proposes to require from its medical graduates a high standard of educational and technical attainment. Professor Hepburn's work, in connexion with the upbuilding of the medical school in Cardiff, has gone far to realise the University's ideals. The Council will follow with interest the progress of the movement towards higher professional education to which, with a laudable ambition to excel, the Welsh nation has thus committed itself.

Last November I intimated that Professor Cash, of the University of Aberdeen, and Mr. Verrall, the fourth member elected by the practitioners of England and Wales, were about to enter the Council. To-day they take their places among us. I may in your name assure them, and the other new

members, that we are glad to share our responsibilities with them, and that we count with confidence on their effective coöperation. Since we last assembled Lord Lister, the most illustrious of our former members, has passed from life, full of years and of honours. At his funeral the nations of the world were united in offering their tributes of gratitude and veneration to his memory. The Council was represented in Westminster Abbey by the President and other members, and on its behalf the Executive Committee conveyed to Lord Lister's family a suitable expression of its sympathy. The Council will ever proudly cherish the recollection that the founder of antiseptic surgery was at one time enrolled in its membership.

The National Insurance Bill, which occupied much of our attention last session, has passed into law. A number of the Council's amendments, proposed in the interest of professional efficiency, which is also the interest of the public, were adopted in principle by the Government. But important questions of a like nature arise directly or indirectly from the provisions of the Act as it now stands, and it remains to be seen whether the powers conferred on the Insurance Commissioners suffice to ensure that these questions shall be solved in a satisfactory manner. At an early stage in their proceedings the Commissioners under the Act invited the Council to appoint representatives, for the purpose of taking part, with many other bodies and persons, in an informal conference on the medical aspects of the scheme. It seemed to myself, and to the members I was able to consult, that the invitation indicated some misapprehension of the functions and procedure of the Council. The committee on the Bill had discharged the duties remitted to it when the Bill became an Act. Further instructions could be given only by the Executive Committee or the Council itself, and neither was in session. It was therefore impracticable, in response to the invitation received, to procure the appointment of duly authorised representatives, and I informed the Commissioners accordingly. The proposed conference was afterwards postponed, and I am not aware that it has since been convened. Meanwhile, with the assistance of large and influential Advisory Committees, the Commissioners are preparing regulations for the administration of medical, maternity, and sanatorium benefits. These regulations must of necessity have a bearing on various matters which directly concern this Council, such as clinical and obstetrical instruction, the guarantees for efficient practice, and the exercise of professional discipline. It is therefore important that the Council should have an opportunity of considering the regulations from the point of view imposed upon it by its statutory responsibilities, and there is reason to expect that such an opportunity will be offered. The Council will probably think fit to arrange for the appointment of a special committee to study the operation of the Act, and of any regulations proposed to be made thereunder, with the object of safeguarding the educational and other interests which I have indicated.

A Select Committee of the House of Commons has been appointed "to consider and inquire into the question of patent and proprietary medicines and medical preparations and appliances, and advertisements relating thereto; and to report what amendments, if any, in the law are necessary or desirable." The question has obvious relations to the work of the Pharmacopœia Committee and of the Unqualified Practice Committee of the Council. In reply to an official invitation I have therefore suggested that Dr. Tirard, as an editor of the Pharmacopœia, and Dr. Langley Browne, as chairman of the Unqualified Practice Committee, should offer themselves as witnesses on the subject. Dr. Tirard has already appeared once before the Select Committee, but his evidence is not yet completed.

Information has reached me that the Dominion Medical Act of last year, due in great measure to the unwearying efforts of Dr. Roddick, of Montreal, has now been adopted severally by each of the provinces of Canada. Should this information prove correct, the way is at length open for the establishment of a Medical Register for the Dominion as a whole, and for the introduction of inter-provincial reciprocity in respect of medical qualifications and privileges. These results have long been desired in this country as well as in Canada. In due time they will doubtless be followed by the application of Part II. of the Medical Act (1886) to the Dominion, as it has now been applied to all the other possessions of the Crown in which medical qualifications are conferred. Already much has been done, at the instance of the Council, to promote uniformity of educational standard and equality of professional rights throughout the Empire. By the entrance of Canada into the federal relation a necessary condition for the ultimate establishment of British (in the sense of Imperial) registration will have been fulfilled.

The programme of business contains a notice of motion that is of special interest in this connexion. It calls attention to the importance of maintaining the system of registration first established in 1858, a system which has made it possible to ensure uniformity of professional standards and privileges within the United Kingdom itself. It is accordingly suggested that in the Government of Ireland Bill, now under consideration by the Legislature, the power of altering the Medical and Dentists Acts should be reserved to the Imperial Parliament.

The editors of the British Pharmacopœia have been diligently occupied during the recess in preparing the draft-text of the new issue. Two important sections of the work are now ready for detailed examination and revision by the Pharmacopœia Committee. Committees of reference in chemistry and in botany have been appointed for purposes of consultation on points of scientific nomenclature, identification, and the like. During the summer special meetings of the Pharmacopœia Committee will be held, in order to accelerate the preparation of the text for press. By the incorporation of such portions of the Indian and Colonial Addendum as are proved to be serviceable, the new Pharmacopœia will be adapted more fully than its predecessors to the varied requirements of the Empire at large.

By courtesy of the Indian Government the Council has received much valuable information regarding the courses of study and examination required of candidates for the subordinate grades of the medical service in India. The committees of the Council, and certain of the licensing bodies in this country have hitherto found some difficulty in ascertaining necessary particulars concerning such candidates when they apply for admission to examination in this country. As a result some differences of practice have arisen which it is desirable to obviate. The Joint Committee to which the question was referred in November will now report upon it for your information. In the meantime the officials at the India Office are considering methods by which the actual curricula and examinations taken by Indian candidates for British diplomas may be conveniently certified to the medical authorities here.

Under instructions from the Executive Committee, Mr. Harper, as solicitor to the Council, has prepared a volume containing reports of all the cases tried before the Superior Courts, in which questions affecting the interpretation of the Medical and Dentists Acts were involved. Inasmuch as the powers and the gradually elaborated practice of the Council, as a tribunal, rest in large measure on judicial decisions given in connexion with these cases, Mr. Harper's careful and comprehensive digest will be of value not only to our members and officers, but to the public and the profession in general. The Education Committee have considered what changes should be made in the regulations respecting the registration of students, and in those relating to the medical curriculum, in order to bring them into harmony with recent decisions of the Council. A report on the matter, and a revised statement of the Council's resolutions, will be laid before you. In accordance with an understanding arrived at last November, a proposal will be submitted to you for defining the portion of the five years' curriculum which may be reckoned as already spent in medical study in the case of registered students who have received instruction in the preliminary sciences at institutions other than recognised schools of medicine.

I regret that the Finance Committee have to report a deficit on the accounts of 1911. This is in a large measure due to an exceptional cause—namely, the expense of repeated elections. As I have already pointed out, much of this expense might be avoided in future were certain slight changes made in the statutory regulations. There is ground for the belief that the Privy Council may be willing to assist us in procuring the necessary modifications. Meanwhile, it is satisfactory to observe that the business before the Council at the present session is not likely to call for any serious expenditure, and that, thanks to the careful preparation made by your officers and committees, the work in hand can be accomplished within the present week.

On the motion of Dr. LITTLE, the President was thanked for his address.

Examination Tables.

Certain tables showing the results of various professional medical and dental examinations, public health examinations, and examinations for vacancies in the Naval, Army, and Indian Medical Services were presented to the Council.

On the motion of Sir DAVID MCVAIL it was agreed:—

That the thanks of the Council be conveyed to the Director-General of the Medical Department of the Royal Navy, the Director-General of the Medical Department of the Army, and the Under-Secretary of State for India respectively, for the returns which they have again furnished to the Council, with the request that such returns may in the future continue to be furnished to the General Medical Council.

Appointment of Committees.

The committees of the Council were appointed as follows:

Business Committee.—Dr. Norman Moore (chairman), the President, Sir Henry Morris, and Sir C. Nixon.

Executive Committee.—Dr. Norman Moore, Sir Henry Morris, Mr. Tomes, Dr. Langley Browne, Sir J. W. Moore, Sir Charles Ball, Sir D. McVail, and Mr. Hodsdon.

Penal Cases Committee.—Dr. Saundby, Mr. Tomes, Dr. Norman Walker, and Sir C. Nixon.

Pharmacopœia Committee.—The President (chairman), Dr. Norman Moore, Sir George Philipson, Dr. Caton, Dr. Barrs, Sir Thomas Fraser, Sir David McVail, Sir John Moore, and Sir William Whitla.

Finance Committee.—Mr. Tomes (chairman), the President, Sir Henry Morris, Dr. Little, and Mr. Hodsdon.

Dental Committee.—The President (chairman), Sir Henry Morris, Mr. Tomes, Mr. Hodsdon, and Sir Arthur Chance.

Dental Education and Examination Committee.—Mr. Tomes (chairman), the President, Sir Henry Morris, Sir Arthur Chance, Sir Charles Ball, and Dr. Knox.

Students' Registration Committee.—Dr. Norman Moore (chairman), the President, Dr. Mackay, Dr. Norman Walker, Dr. Adye-Curran, Sir C. Nixon, and Dr. Langley Browne.

The Insurance Act and Medical Education.

Mr. HODSDON moved:—

That a committee be appointed to consider the possible effects of the National Insurance Act on medical education and examination in relation to the efficient practice of medicine, surgery, and midwifery, to make representations thereon to the authorities concerned, and to report from time to time to the Council.

He stated that the Council had appointed a committee to watch the progress of the Insurance Bill. That committee had now ceased to exist. When the Insurance Act came into force changed conditions in regard to the medical profession and its training would arise. It appeared important, therefore, that a committee of the Council should be appointed to watch the effects of the operation of the Act, and in so far as any of the changes brought about by the Act might fall within the statutory limits of the Council's sphere in regard to education, to bring them to its notice.

Sir F. CHAMPNEYS seconded. He entirely endorsed the remarks made by the mover.

Sir W. WHITLA said that the medical faculty of his University had addressed a communication to the Council on this subject.

Sir JOHN MOORE remarked that it was probably within the knowledge of every member of the Council that the Act put a premium on lying-in women being attended elsewhere than in lying-in hospitals. This would prejudice the midwifery teaching for which Dublin was justly celebrated.

Dr. MACDONALD thought that medical schools would find that their material for the instruction of students in ordinary medical and surgical work would be very much reduced.

The motion was agreed to unanimously, and on the motion of Mr. HODSDON a committee to carry out the purposes of the resolution was appointed as follows:—The President, Dr. Norman Moore, Dr. Saundby, Sir F. Champneys, Dr. Langley Browne, Dr. Latimer, Mr. Hodsdon, Dr. Mackay, Sir David McVail, Dr. Norman Walker, Sir Arthur Chance, Sir Charles Ball, and Dr. Kidd.

The PRESIDENT remarked that he believed that the regulations when approved might be submitted to the Council for their consideration.

Medical Practice and Home Rule.

Sir CHARLES BALL moved:—

That in the opinion of the Council it is important in the public interest that a uniform standard of Medical and Dental Education and Registration should be maintained in Great Britain and Ireland, and that accordingly steps should be taken to procure the insertion in the Government of Ireland Bill of provisions, reserving to the Imperial Parliament the control of legislation relating to the Medical and Dentists Acts; and that the President be requested to communicate this resolution to the Lord President of the Privy Council.

He said that the Bill for the Government of Ireland now before Parliament in its principles could not be, of course, discussed by the Council. It was, however, the duty of the Council to see that if the Bill became law no injury should be done to medical education and registration. There were specific matters which were reserved in the Bill to the Imperial Parliament to deal with, but the Medical Act was not one of them. If medical education and registration were added to these reserved subjects the whole difficulty would be got over. If no such amendment were introduced into the Bill it would be open to the Irish legislature to repeal the Medical Acts so far as they affected Ireland. Supposing the Irish legislature then thought fit, it could set up a separate Medical Register for Ireland and fix a different standard of examination and education. It was probable, he thought, if the Irish legislature did deal with this matter that it would not attempt to lower the standard of what was considered right and proper here. It might even introduce a stronger clause in regard to unqualified practice. There was a possibility that there would be an agitation to cause the Irish legislature to lower the standard below what was required in Great Britain. It would be extremely undesirable that any separation of the laws affecting medical education should take place. He hoped that if the matter were brought to the attention of the Lord President of the Council there would not be much difficulty in putting words into the Bill to meet the case.

Dr. NORMAN MOORE seconded. He thought that anything which tended to break up the uniformity of the control of medical education in Great Britain and Ireland would be very injurious to the public of both islands. It was clearly in the public interest to have a single standard and a single Register by which people could tell whether a medical man was fit to work amongst them or not.

Sir W. WHITLA asked whether the maintenance of the British Pharmacopœia in Ireland was involved.

Dr. ADYE-CURRAN deprecated the idea of the Council adopting the motion at a time when there was so much political strife.

Sir C. NIXON, in supporting the motion, said that what he wanted to secure was that a great profession should be guaranteed equal rights all over the Empire. The Council should secure for Irish practitioners throughout the world exactly the same privileges as English and Scottish practitioners had. He did not believe that his countrymen would follow the policy of securing a local advantage which would be destructive of the interests of the profession in England, Scotland, and the Empire.

Sir ARTHUR CHANCE said that if Sir Charles Ball's motion meant to prevent such a state of affairs that medical men qualified in Ireland should be restricted to practice in Ireland then he was in accord with it.

The PRESIDENT remarked that if the Pharmacopœia were not exempted from the subjects on which the Irish legislature might legislate, it would be within the competence of that body to re-establish the Dublin Pharmacopœia and to make the British Pharmacopœia no longer applicable to Ireland. However, the powers of the Council in regard to the Pharmacopœia were contained in the Medical Acts. He went on to say that if the Government of Ireland Bill passed without the amendment for which Sir Charles Ball asked it would be possible for the Irish legislature to put Ireland in the same relation to Great Britain as Ontario had been to the Dominion of Canada. Ontario had had a Medical Act which provided that no one should practise medicine in the province who had not passed the requisite examination in Ontario. It would be possible for the Irish legislature to do the same thing and to exclude practitioners qualified in other parts of the Empire.

The motion was then carried *nemine contradicente*.

The Unqualified Practice Prevention Committee.

It was agreed that Mr. Verrall should be placed on the Unqualified Practice Prevention Committee.

The Forms of the Council.

On the motion of the PRESIDENT, the Council approved of certain alterations in the forms of the medical registration certificate, and in the forms of the statutory declaration by applicants for restoration of names to the Medical or Dentists Registers. The President explained that no change in substance was made, but the change in form would conduce to convenience.

The Students Annual Register.

Dr. ADYE-CURRAN moved—

That inasmuch as the expenditure of certain sums out of the funds of this Council in the compilation and publication of the Students Annual Register is not sanctioned by law, the same be henceforth discontinued.

The PRESIDENT remarked that the expenditure was not actually enjoined upon the Council, but it was nevertheless quite within the scope of its authority to incur it.

Dr. Adye-Curran's motion failed to find a seconder and it accordingly dropped.

The Council then adjourned.

WEDNESDAY, JUNE 5TH.

The Council considered several charges against practitioners and dealt with several reports of its committees.

THE NATIONAL INSURANCE ACT.

PROVISIONAL INSURANCE COMMITTEES FOR ENGLAND.

THE Insurance Commissioners for England announce that they are taking steps to set up Provisional Insurance Committees for counties and county boroughs in England, exercising the powers conferred on them by Section 78 of the Act. These Provisional Insurance Committees will hold office until committees can be regularly constituted in accordance with the provisions of the Act. The Commissioners state that so far as possible the number of members and the composition of the Provisional Committees will be based on the provisions of the Act, and that the committees will be so constituted that there shall not be lacking any important element of the various kinds of experience which it is desirable should be comprised in the first committees. The representation of insured persons will be secured mainly by utilising the machinery at the disposal of the central organisations of Friendly Societies, trade unions, and industrial insurance offices for selecting suitable persons to be members of the committee, and steps are being taken with a view to obtaining the names of medical practitioners for inclusion on the committees.

The Commissioners have requested the British Medical Association to assist them by obtaining from the various district or provisional committees of the Association the names of two medical practitioners for each Insurance Committee.

It is important to note that this matter was considered at a meeting last week of the State Sickness Insurance Committee of the British Medical Association, when a letter was read from Sir Robert Morant to the effect that the National Insurance Commissioners intended at once to set up Provisional Insurance Committees for county and county boroughs.

The committee, after careful consideration, decided to inform the Commissioners that, acting under the resolutions of the last special Representative Meeting in February, 1912, they found it impossible to assist the Commissioners in the manner desired by obtaining from the various district or provisional committees of the association the names of representatives for the suggested Provisional Insurance Committees.

SCOTTISH MEDICAL INSURANCE COUNCIL.

THE Executive Committee of the Scottish Medical Insurance Council met on May 29th at Perth, and considered an invitation, dated May 27th, from the Scottish Insurance Commissioners to a conference, with a view to nominating and appointing medical members on the Provisional Insurance Committees which the Commissioners proposed to set up, utilising their powers under Clause 78 of the Act. The Executive Committee decided that they could not see their way to accept this invitation or to approve of medical practitioners taking office in this way at the present time. Their reply stated that the Scottish Medical Insurance Council had already organised a Medical Committee, selected by the medical practitioners in the respective areas, in nearly every insurance area in Scotland. The demands of the profession were well known to the Commissioners, and as soon as these were frankly conceded in the Regulations to be issued by the Commissioners the Council would be prepared to advise or to take such steps as might be required for the election of medical representatives to the Provisional Local Insurance Committees. Meanwhile, the Executive Committee failed to see that there could be any practical outcome of a conference with the Commissioners on the point indicated.

THE NEW COUNCIL OF THE BRITISH MEDICAL ASSOCIATION.

THE following are the nominations for the Central Council of the British Medical Association for 1912–13:—

ENGLAND AND WALES.

North of England and North Lancashire and South Westmorland Branches.—David Fee Todd, M.D.

Yorkshire Branch.—James Metcalfe, M.D.

Lancashire and Cheshire Branch.—John Brown, M.D., Francis James Strong Heaney, M.D., Thomas Arthur Helme, M.D., Stanley Hodgson, M.R.C.S., Frederic Charles Larkin, F.R.C.S., Jerome Eugene O'Sullivan, L.R.C.P., and Ernest Septimus Reynolds, M.D.

East York, North Lincoln, and Midland Branches.—Frank Montague Pope, M.D.

Cambridge and Huntingdon, East Anglian, and South Midland Branches.—John George Durran, M.B., and Benjamin Hugh Nicholson, M.B.

Birmingham and Staffordshire Branches.—Albert Lucas, F.R.C.S.

North Wales, Shropshire and Mid-Wales, and South Wales and Monmouthshire Branches.—David James Williams, F.R.C.S.

Metropolitan Counties Branch.—Thomas Launcelot Archer, M.R.C.S., Moses George Biggs, M.D., Charles Buttar, M.D., John Reginald Fuller, M.D., Major Greenwood, M.D., Ernest Ward Lowry, M.R.C.S., Basil Gordon Morison, M.D., Frederick John Smith, M.D., and Alfred Henry Williams, M.D.

Bath and Bristol, Gloucestershire, West Somerset, and Worcestershire and Herefordshire Branches.—Herbert Jones, L.R.C.S., and George Parker, M.D.

Dorset and West Hants and South-Western Branches.—Edward James Domville, M.R.C.S., and Charles Henry Watts Parkinson, M.R.C.S.

Oxford and Reading and Southern Branches.—Bonner Harris Mumby, M.D., and Walter John Turrell, M.D.

South-Eastern Branch.—John Henry Ewart, M.R.C.S., Ernest Rowland Fothergill, M.B., and William Joseph Tyson, M.D.

SCOTLAND.

Aberdeen, Northern Counties of Scotland, Dundee, and Perth Branches.—John Gordon, M.D.

Edinburgh and Fife Branches.—John Rogerson Hamilton, M.D.

Glasgow and West of Scotland Branch (Four City Divisions).—John Adams, M.B., Ebenezer Duncan, M.D., and William Limont Muir, L.R.C.P.

Glasgow and West of Scotland (Four County Divisions), Border Counties, and Stirling Branches.—Robert Durward Clarkson, M.D., and James Livingstone London, M.D.

IRELAND.

Connaught and South-Eastern of Ireland Branches.—No nominations.

Leinster Branch.—No nomination.

Munster Branch.—Professor Henry Corby, M.D.

Ulster Branch.—Robert James Johnstone, F.R.C.S.

Obituary.

SIR W. THORNLEY STOKER, BART., M.D., M.CH. (HON. CAUSÂ) R.U.I., F.R.C.S. IREL.,

H.M. INSPECTOR OF ANATOMY FOR IRELAND AND GOVERNMENT INSPECTOR FOR IRELAND UNDER THE VIVISECTION ACT; CONSULTING SURGEON TO THE RICHMOND, WHITWORTH, AND HARDWICKE HOSPITALS; AND LATE PRESIDENT OF THE ROYAL COLLEGE OF SURGEONS IN IRELAND.

By the death of Sir W. Thornley Stoker, which took place at his residence in Dublin on Saturday evening, June 1st, the medical profession has lost one of its most prominent Irish members. Born in Clontarf, Dublin, on March 6th, 1845, he was the eldest of the five sons of the late Mr. Abraham Stoker (who for half a century held office in the Chief Secretary's bureau at Dublin Castle) by Charlotte, the daughter of Captain Thomas Thornley. He received his early education at the Wymondham Grammar School, and having decided to enter the medical profession subsequently studied medicine in Dublin at the Royal College of Surgeons, and at Queen's College, Galway. In 1866 he graduated in medicine at the Royal University of Ireland, and in the following year became Licentiate of the Royal College of Surgeons in Ireland. In 1872 he became a Licentiate of the Royal College of Physicians of Ireland, and in the following year proceeded to the Fellowship of the Royal College of Surgeons. He was appointed professor of anatomy in the medical school attached to that corporation in 1876, and held the post until 1889. Five years later he was elected President of the College, holding the post from 1894 to 1896.

SIR THORNLEY STOKER, BART.

(Reproduced from a photograph by Messrs. Elliott and Fry, Limited.)

Sir Thornley Stoker was a man of considerable learning and wide culture. He commenced his professional work rather as a tutor than as a surgeon, but his abilities called him to more active service of the public, and he soon entered upon private practice, where his combination of genuine skill with a kindly disposition obtained for him in a short time a very extensive *clientèle*. In 1873 he was appointed surgeon to the Royal City of Dublin Hospital, and from this time forward he was a very successful man who was constantly in request to fill important posts. In 1878 he became visiting surgeon to Swift's Hospital for the Insane, which position he held at the time of his death, besides being a governor of that institution. He was a Surgical Fellow of the Royal University of Ireland; he was President of the Royal Academy of Medicine in Ireland from 1903 to 1905, Inspector of Anatomy for Ireland, Government Inspector under the Vivisection Act, and consulting surgeon and governor of the Richmond, Whitworth, and Hardwicke Hospitals, for which institution he had always had a very deep and affectionate interest from the date of his appointment in 1873. It was largely due to his energy, coupled with that of his brother-in-law, Sir William Thompson, that the Richmond, Whitworth, and Hardwicke Hospitals were recently rebuilt at a cost of £50,000. He was also honorary professor of anatomy of the Royal Hibernian Academy of Art, Governor of the National Gallery of Ireland, and ex-Governor of the Royal Hibernian Military School. He took an especial interest in the Workhouse Reform Association, and he was a generous supporter of the Royal Medical Benevolent Fund Society of Ireland. He contributed frequently to the Transactions of the Royal Academy of Medicine in Ireland, among his papers being one on Operative Treatment of Trifacial Neuralgia, and another on Management of Cases Immediately after Operation; but he was not a prolific contributor to medical journals, nor was he ever moved to write a book. He was interested in music and the drama, and was an enthusiastic collector. For many years he resided in Ely House, now belonging to the Women's National Health Association, and the mansion was restored by him to the style which it enjoyed under its early owner, the Marquis of Ely. Here he made an extremely valuable collection of works of art which was sold after the death of Lady Stoker, Emily, the daughter of Mr. William Stewart, whom he married in 1875, and who died in 1910 without issue.

The honour of knighthood was conferred upon him at the instance of Lord Crewe (then Lord Houghton) when retiring from the post of Lord Lieutenant of Ireland in 1895. Sir Thornley Stoker was then President of the Royal College of Surgeons in Ireland, and a dinner in honour of the occasion was given to him by a very large number of his professional friends, colleagues, and admirers at the end of the year. The use of the large hall of the College was specially voted by the Council for the purpose, but proved unable to accommodate the number of medical men who wished to avail themselves of the opportunity of congratulating him upon a well-deserved honour. He was created a baronet last year, his name being included in the list of honours which was issued during the Coronation period of His Majesty King George V. No one denied him his success or distinctions, scientific or social. His life was marked by philanthropic motive, and his worth endeared him to those brought into contact with him.

Of Sir Thornley Stoker's four brothers two are in the medical profession—Colonel Richard Stoker, of the Indian Medical Service, and Mr. George Stoker, C.M.G., who was with the Turks through the Bulgarian and Russian campaigns and who served with the Irish hospitals during the war in South Africa.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. K. Josef v. Bauer, professor of medicine in Munich and director of the University Medical Clinic. He wrote a number of articles in Ziemssen's "Handbook" besides

papers on a variety of medical topics. His age was 60.—Dr. W. M. Gunning, formerly professor of ophthalmology in Amsterdam, at the age of 76. He was one of the earliest pupils of Donders in Utrecht. He was associated with Snellen in a Government inquiry into an epidemic of trachoma which occurred in 1859. He was afterwards appointed lecturer on ophthalmology in Amsterdam, and later succeeded to the professorship. He was for many years president of the Prince Alexander Society for the Relief of the Blind in Holland and its Colonies, and only two years ago was appointed honorary president of the Dutch Ophthalmological Society.

Medical News.

UNIVERSITY OF LONDON.—At the Third Examination for medical degrees held in May the following candidates were successful:—

M.B., B.S.

Honours.—*Evan Parry Evans, University College, Cardiff, and London Hospital; †‡Maud Frances Forrester-Brown, London (Royal Free Hospital) School of Medicine for Women; ‡Thomas Chivers Graves, B.Sc. (Vet. Sci.), University College Hospital; *Philip Henry Mitchiner (University Medal), St. Thomas's Hospital; *Donovan Blaise Pascall, St. Bartholomew's Hospital; *Harold Rowntree, Middlesex Hospital; and *Catherine Violet Turner, London (Royal Free Hospital) School of Medicine for Women.

* Distinguished in Medicine. † Distinguished in Pathology.
‡ Distinguished in Forensic Medicine.

Pass.—John Wroth Adams, St. Bartholomew's Hospital; Melville Mortimer Adams, Guy's Hospital; Frederick Jasper Anderson, St. Bartholomew's Hospital; Winifred Austin, London (Royal Free Hospital) School of Medicine for Women; Grantley Barratt, London Hospital; Bertie Blackwood and Joseph Henry Campain, Guy's Hospital; Gilbert Charles Chubb, D.Sc., University College Hospital; William Chalmers Dale, St. Bartholomew's Hospital; John Lloyd Davies, University College Hospital; Arthur Ffolliott William Denning, Guy's Hospital; Josiah Rowland Benjamin Dobson, University College, Cardiff, and St. Bartholomew's Hospital; Macormack Charles Farrell Easmon, St. Mary's Hospital; Archibald Ferguson, St. Bartholomew's Hospital; Norman Frankish Graham, London Hospital; Arthur Sydney Hahn, University of Sheffield and University College Hospital; Alexander Keith Hamilton, St. Thomas's Hospital; Reginald Simpson Harvey, University of Leeds; Frederic James Humphrys, St. Thomas's Hospital; Edward Lewis Hunt, St. George's Hospital; Charles Eric Sweeting Jackson, St. Mary's Hospital; William Henry Kauntze, Victoria University of Manchester; Henry Goff Kilner, Middlesex Hospital; William Balfour Laird, St. Thomas's Hospital; Andrew Bonar Lindsay, London Hospital; Martin Wentworth Littlewood, St. Thomas's Hospital; Jivraj Narayan Mehta, Grant Medical College, Bombay, and London Hospital; Ernest Spencer Miller, University of Liverpool; Harold Arundel Moody, King's College Hospital; Richard Naunton Ouseley Moynan, University College Hospital; Alfred Arthur Edmund Newth, Westminster Hospital; Edgar Lionel Robert Norton, Bernard Rayne Parmiter, and Richard Douglas Passey, Guy's Hospital; Edward Hesketh Roberts, University College Hospital; Kenneth Robinson, Victoria University of Manchester; Samuel Pryce Rowlands, King's College Hospital; Edward Albert Seymour, St. Thomas's Hospital; Bernard Sangster Simmonds, Middlesex Hospital; Arthur Hitchings Thomas and Thomas Anger Fereman Tyrrell, St. Mary's Hospital; and Francis Silvanus Williams, St. Bartholomew's Hospital and University College, Cardiff.

The following candidates have passed in one of the two groups of subjects:—

Group I.—Helen Patricia Barnes, London (Royal Free Hospital School of Medicine for Women; Frank Charles Weeks Clifford, King's College Hospital; Henry StClair Colson, Westminster Hospital; Grace Marion Cordingley and Gertrude Dearnley, London (Royal Free Hospital) School of Medicine for Women; Charles Alwis Hewavitarna and Harold William Hills, B.Sc., University College Hospital; Augustine Henry Hudson, St. Thomas's Hospital; George William Blomfield James, St. Mary's Hospital; Mirza Mohammed Khan, University College Hospital; William Matthews, Guy's Hospital; Purushottam Tulsidas Patel, Grant Medical College, Bombay, and London Hospital; Sara Louisa Penny, London (Royal Free Hospital) School of Medicine for Women; Hugh Ridley Prentice, St. Bartholomew's Hospital; George FitzPatrick Rigden, Westminster Hospital; and Frederic Sanders and William Wallace Wood, London Hospital.

Group II.—Carlyle Aldis, Guy's Hospital; Cuthbert Hastings Attenborough, King's College Hospital; Henry Washington Bachelor, London Hospital; Florence Hilda Bousfield, London (Royal Free Hospital) School of Medicine for Women; Basil William Brown, Westminster Hospital; Bertie Isaac Cohen, St. George's Hospital; Thomas Philips Cole, Guy's Hospital; William Halley Eggar and Frederick Wood Hamilton, Middlesex Hospital; Alan Waites Hansell, University of Leeds and University College Hospital; Arthur William Havard, London Hospital; Reginald Gordon Hill and Bernard Whitchurch Howell, St. Bartholomew's Hospital; Robert Henry Liscombe, University College Hospital; George Harold Pearson, James Potter, and William Faulkner Valentine Simpson, London Hospital; Henry Kenneth Victor Soltau, St. Bartholomew's Hospital; John Tattersall, St. Mary's Hospital; Thomas Davies Williams, London Hospital; and Edward Alfred Wilson, Middlesex Hospital.

N.B.—This list, published for the convenience of candidates, is issued subject to its approval by the Senate.

UNIVERSITY OF OXFORD.—The following degree has been conferred:—

D.M.—E. A. Cockayne, Balliol.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berlin:* Dr. F. Neufeld, of the Imperial Health Service, has been appointed a Principal Officer of the Institute for Infectious Diseases.—*Innsbruck:* Dr. Günther v. Saar, of Gratz, has been recognised as *privat-docent* of Surgery.—*Iurieff (Dorpat):* Dr. Vorobjev, of Kharkoff, has been appointed to the chair of Anatomy in succession to Dr. Rauber.—*Leipsic:* Dr. Arthur Knick has been recognised as *privat-docent* of Otology.—*Prague (German University):* Dr. Ferdinand Schenk, *privat-docent* of Midwifery and Gynæcology; Dr. Edmund Hoke, *privat-docent* of Medicine; and Dr. Richard H. Kahn, *privat-docent* of Physiology, have been granted the title of Extraordinary Professor.—*Turin:* Dr. Mario Donati has been recognised as *privat-docent* of Surgery and Operative Medicine.—*Vienna:* Dr. Walter Hausmann has been recognised as *privat-docent* of General and Comparative Pharmacology.—*Würzburg:* Dr. Flury, who is both an apothecary and a medical man, being Doctor of Philosophy and Doctor of Medicine, has been recognised as *privat-docent* of Pharmacology.

UNIVERSITY OF LONDON.—The examination for the Bucknill entrance scholarship of the value of 135 guineas, and for the two exhibitions of the value of 55 guineas each, tenable in the Faculty of Medical Sciences at University College, London, will be held this year, and until further order, in July, and not, as in previous years, in September. The subjects of the examination are chemistry, physics, botany, and zoology. Notice of intention to compete must reach the secretary of the College not later than Tuesday, July 9th.—Mr. W. J. Dakin, D.Sc., at present assistant lecturer and demonstrator in zoology in the University of Liverpool, has been appointed senior assistant in the Department of Zoology and Comparative Anatomy at University College, London.

THE INSURANCE ACT SANATORIUMS IN WILTSHIRE.—At the last meeting of the Calne (Wilts) district council and board of guardians a letter was read from the Wilts County Council stating that before the establishment of the sanatoriums and dispensaries for pulmonary tuberculosis, it was proposed to invite the local authorities to a conference on the subject. The communication also stated that it would be necessary for the county council to avail itself of the Parliamentary grant, which for Wiltshire would be £10,000, and the 1*s.* 3*d.* per head for the upkeep of these institutions would amount to £5500 per annum. A series of questions was enclosed, and the clerk was instructed to reply to them, and to point out that at present cases of pulmonary tuberculosis were treated in the workhouse when necessary, and that the guardians and councillors were always able to have patients sent to a sanatorium.

INTERNATIONAL CONGRESS OF AMERICANISTS.—An interesting gathering was held from May 27th to June 1st, when, on the invitation of the Royal Anthropological Institute, the Eighteenth International Congress of Americanists met at the Imperial Institute, South Kensington, by the courtesy of the University of London. It was attended by some 200 scientists of all nationalities, by official delegates from all the principal European, Australian, and American Governments, and from a large number of learned societies and universities in both the old world and the new. The University of Oxford was represented by Professor J. L. Myres, M.A., and Mr. Henry Balfour, M.A.; Cambridge by Dr. Alexander Macalister and Mr. Alfred Cort Hadden, D.Sc.; the Royal Geographical Society by Sir Everard im Thurn, K.C.M.G.; the Society of Antiquaries by Sir Edward Brabrook, C.B.; the British Museum by Dr. C. H. Read; and the University of London by Dr. C. G. Seligmann. Sir William Osler, on behalf of the Board of Education, welcomed the foreign members. The objects of the Congress are to promote scientific inquiry into the history of both Americas and their inhabitants. The main subjects of discussion dealt with the origin, distribution, history, physical characteristics, languages, customs, and religions of the native races of America, and with the history of the discovery and European occupation of the New World. To

the medical man it was disappointing that the paper of F. C. Mayntzhusen, of Alto Parana, Argentine Republic, on the Customs of the Guayaki relating to Childbirth and Name Giving, was not read, for according to the official abstract it described minutely the obstetric procedures practised by this people, the massage of the new-born infant by pinching it all over, and the method of deforming its head by pressing it between the hands, one against the back of the head, the other against the chin, to bring about a mesocephalic skull, during which operation, it is said, the child did not cry. An interesting paper was that of Jonkheer L. C. van Panhuys, of The Hague, on Recent Discoveries in Dutch Guiana, in which the following conclusions of Lieutenant P. C. Flu, who was sent by the Dutch Government to inquire into the malarial fever in Surinam, were given. Lieutenant Flu reported that the tropical malaria—the only cause of unhealthiness in the interior of the colony—had been imported there by the Bush negroes, who brought with them the African malaria when they were imported from Africa to Surinam. The malarial fever is carried chiefly by the Anopheles albipes. Most probably the malaria has spread among the Indians only since their contact with the Bush negroes and the gold diggers. He points out that to stay in Surinam without mosquito protection is deadly, while Schomburgk was able to travel in the interior of the neighbouring British Guiana with Indians for eight years without any illness. Lieutenant Flu, it was stated, also discovered the exact way in which filariasis is carried by mosquitoes, and reported on the marvellous effects of salvarsan in frambœsia or yaws, by the use of which in a few days the entire hospital of patients, 328 in number, recovered, so that in less than a month the hospital could be closed. Another paper that evoked considerable interest was that by Dr. C. Bleyer, on Anthropophagous Prehistoric Cave Dwellers on the Plateaux of Brazil. The other papers were mainly of a purely archæological character. The Congress now meets every two years, and each Congress is a separate entity, arranged by a local committee, but the leading members are fairly constant in their attendance. The Duke of Connaught is patron, and the Council numbers on its general committee many distinguished names: the Duke of Argyll; Lord Curzon of Kedleston, President of the Royal Geographical Society and Chancellor of Oxford University; Earl Grey, late Governor-General of Canada; the Right Hon. James Bryce; Sir Francis Hodgson, ex-Governor of British Guiana; Sir Archibald Geikie, President of the Royal Society; and the Vice-Chancellors of the Universities of Oxford, Cambridge, London, Manchester, Liverpool, and Edinburgh. Much of its success this year was due to the energies of Mr. T. W. Joyce, of the organising committee, the organising secretary, Mr. F. C. A. Sarg, and Miss A. C. Breton, the assistant secretary. The first Congress was held at Nancy in 1875, the subsequent ones being held as follows: Luxembourg, 1877; Brussels, 1879; Madrid, 1881; Copenhagen, 1883; Turin, 1886; Berlin, 1888; Paris, 1890; Huelva, 1892; Stockholm (under the presidency of Professor R. Virchow), 1894; Mexico, 1895; and Paris, 1900. From this time on the Congresses have met alternately in the new world and the old as follows: New York, 1902; Stuttgart, 1904; Quebec, 1906; Vienna, 1908; Buenos Aires (May) and Mexico (September), 1910. The next Congress will meet in Washington, D.C., in October, 1914, with a second session at La Paz, Bolivia.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The Lighting of the House of Commons.

A REPORT to the First Commissioner of Works regarding a proposal to substitute electric light for gas in the debating chamber of the House of Commons has been made by Mr. E. TREACHER COLLINS, F.R.C.S. He visited the chamber in conjunction with Dr. L. C. PARKES to see if electric lighting arrangements would be in any way likely to be injurious to the eyesight of Members of Parliament. The lighting of the House of Commons is carried out through a glass ceiling. Mr. TREACHER COLLINS points out that ultra-violet rays may produce irritation of the eyes, but in the House of Commons the rays of the electric lamps will be filtered through three layers of glass. The ultra-violet rays will be cut off by the amber colour of the latter. Therefore, in Mr. TREACHER COLLINS's conclusion, there is no fear that the eyesight of Members will be affected by ultra-violet rays. He further found the illumination to be more uniformly diffused and freer from points of a glittering character when the illuminant was electric light and not gas. The question of introducing electric light was discussed on the Office of Works votes on Tuesday, June 4th. Mr. WEDGWOOD BENN intimated that a portion of the roof would be illuminated with electric light. If Members found the experiment an improvement it would be extended to the whole of the lighting arrangements.

Notification of Phthisis in Scotland.

One of the most interesting passages in the annual report of the Local Government Board for Scotland, which has just been issued as a Parliamentary Blue-book, deals with the notification of phthisis in Scotland. The report states that it is now recognised as an indispensable preliminary to effective and complete preventive measures against pulmonary tuberculosis that local authorities should have accurate information of the cases occurring within their districts. The number of local authorities in Scotland which had adopted the notification of this disease at Dec. 31st, 1911, was 111. They represented a population of 2,749,303, or 57·8 per cent. of the total population of the country.

HOUSE OF COMMONS.

TUESDAY, JUNE 4TH.

The International Opium Conference.

Dr. CHAPPLE asked the Secretary of State for Foreign Affairs when it was intended to lay upon the table papers on the subject of the International Opium Conference, including any report made by the British plenipotentiaries.—Sir E. GREY replied: The report of the British delegates to the International Opium Conference is at present being considered by His Majesty's Government, and will be laid as soon as possible.

London University Buildings.

In the course of the debate on estimates for the Office of Works,

Mr. WEDGWOOD BENN (representing the First Commissioner of Works) said in regard to the question whether the University of London buildings were to be erected in the Botanic Gardens, that these gardens were not under the control of the Office of Works. That department had heard nothing of any such proposal, but he thought the First Commissioner of Works would be opposed to the erection of any such buildings in the Botanic Gardens.

West Riding of Yorkshire Asylums Bill.

On the motion for the second reading of the West Riding of Yorkshire Asylums Bill,

Sir JOHN SPEAR, in moving the rejection of the measure, said that at present the lunatics in the West Riding were in charge of two institutions—those of the County Council and of the Poor-law guardians. The proposal of this Bill was to set up a third governing body—a body which would have the power of spending large sums of money, but would not be responsible to the parties who had to raise the money. The proposal was to delegate to a statutory board the powers which were now carried out by the two existing public bodies. The great majority of the Poor-law guardians were opposed to the Bill. He contended that a similar scheme to that here proposed had worked very badly in Lancashire.

Mr. MIDDLEBROOK, in supporting the Bill, declared that it was not proposed to alter or trench upon the powers or duties of any existing authority. It was proposed that county boroughs should be grouped together for purposes of asylum administration. The only change proposed was to make an existing voluntary arrangement into a statutory one.

Mr. ELLIS GRIFFITH (Under Secretary of State for the Home Department) said that by the Bill it was proposed to provide an Asylums Board for Yorkshire similar to the Asylums Board for Lancashire. He would submit to the House that the Bill was an improvement on the present state of affairs. The union of local authorities under it was a permanent one, and none of them would be able to give notice to withdraw from it. There would not be delay in referring matters back to the County Council and the borough councils. He asked the House to give the Bill a second reading.

The opposition to the Bill did not press a division, and it was read a second time.

WEDNESDAY, JUNE 5TH.

Tuberculosis in the Navy.

Mr. MIDDLEMORE asked the Secretary to the Admiralty whether tuberculosis was more prevalent among writers than any other class in the navy; and, if so, whether this was shown to be attributable to the badly ventilated and lighted offices in many of His Majesty's ships.—Mr. MACNAMARA replied: The ratio of cases of tuberculosis per 1000 of all ranks in 1909 was 2·83, of naval writers 2·54. The ratio per 1000 of all ranks in 1910 was 2·29, of naval writers 3·84. No inference of any particular value can be drawn from these ratios as the total number of writers borne compared with the total of all ranks is small. In 1909 the total number of writers borne was 787, with two cases of tuberculosis. In 1910 the total number was 782, with three cases.

BOOKS, ETC., RECEIVED.

ALCAN, FÉLIX, 108, Boulevard Saint-Germain, Paris.

Traité International de Psychologie Pathologique. Directeur Dr. A. Marie (de Villejuif). Tome troisième. Psychopathologie appliquée. Par MM. les Professeurs Bagenoff, Bianchi, Sikorsky, G. Dumas, Havelock-Ellis, Dr. Cullerre, A. Marie, Dexler, F. Helme, Professeur J. Wertheim Salomonson. Price Fr.25.

CHURCHILL, J. AND A., London.

Psychological Medicine. A Manual on Mental Diseases for Practitioners and Students. By Maurice Craig, M.A., M.D. Cantab., F.R.C.P. Lond., Physician for, and Lecturer in, Psychological

Medicine, Guy's Hospital; Examiner in Psychology and Psychological Medicine, London University. Second edition. Price 12s. 6d. net.

A System of Treatment. By Many Writers. Edited by Arthur Latham, M.A., M.D. Oxon., F.R.C.P. Lond., Physician and Lecturer on Medicine, St. George's Hospital; and T. Crisp English, M.B., B.S. Lond., F.R.C.S. Eng., Senior Assistant Surgeon and Lecturer on Practical Surgery, St. George's Hospital. Vol. I. General Medicine and Surgery. Vol. II. General Medicine and Surgery. Vol. III. Special Subjects. Vol. IV. Obstetrics and Gynæcology. Price 21s. net each, and can be bought separately.

HODDER AND STOUGHTON, Edinburgh, Glasgow, and London.

Manual of Surgery. By Alexis Thomson, F.R.C.S. Ed., Professor of Surgery, University of Edinburgh; Surgeon, Edinburgh Royal Infirmary; and Alexander Miles, F.R.C.S. Ed., Surgeon, Edinburgh Royal Infirmary. Volume Second. Regional Surgery. Fourth edition, revised and enlarged. Price 10s. 6d. net.

GILL, GEORGE, AND SONS, LIMITED, 13, Warwick-lane, London, E.C.

First Aid. By Sir John Collie, Kt., M.D., C.M., J.P., Aberdeen, and C. F. Wightman, F.R.C.S. England, Lieut. (late Surg.-Lieut.) 1st Batt. Herts Regt. Sixth edition. 60th thousand. Price 9d. net.

"JUGEND" VERLAG DER, Lessingstrasse, 1, München.

Parerga zum Elektrolytkreislauf. Von Georg Hirth, Verfasser von "Der elektrochemische Betrieb der Organismen." Inhalt: (1) Zellenlähmung und Zellentod infolge von Störungen des Elektrolytkreislaufs. (2) Dynamik und Hygiene des Elektrolytkreislaufs. Price not stated.

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, London.

A Layman's Philosophy. By Alexander Davis. Price 3s. 6d. net.

LAURIE, T. WERNER, Clifford's Inn, Fleet-street, London.

Wild Flowers of the Wood. By W. Percival Westell, D.Sc., F.L.S. With six coloured and 20 Black and White Illustrations by C. F. Newall. Price 1s. net.

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A Year's Gardening. By Basil Hargrave. Price 6s. net.

LEONARD, W. M., 101, Tremont-street, Boston, U.S.A.

The Care of the Insane and Hospital Management. By Charles Whitney Page, M.D., Assistant Physician, Hartford Retreat, Hartford, Connecticut, 1871 to 1872 and 1873 to 1888, Superintendent, Connecticut Hospital for the Insane, Middletown, 1898 to 1901, Superintendent, Danvers State Hospital, Danvers, Massachusetts, 1888 to 1898 and 1903 to 1910. Price $1.00.

LIPPINCOTT (J. B.) COMPANY, Philadelphia and London.

The Diseases of Children. A Work for the Practising Physician. Edited by Dr. M. Pfaundler, Munich, and Dr. A. Schlossmann, Dusseldorf. English translation edited by Henry L. K. Shaw, M.D., Albany, N.Y., and Linnæus La Fétra, M.D., New York. With an introduction by L. Emmett Holt, M.D., New York. In Five Volumes. Vol. V. Price 21s. net.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

Social Work in Hospitals. The Samaritan Fund. With a Table showing the Work Done in London. Being a Paper read before the Incorporated Association of Hospital Officers, March 15th, 1912. By Sydney Phillips, B.A., of the Inner Temple, Barrister-at-law, Steward of St. Thomas's Hospital, London. Price 6d. net.

Preventable Cancer. A Statistical Research. By Rollo Russell. Price 4s. 6d. net.

SAUNDERS (W. B.) COMPANY, Philadelphia and London.

Dental State Board Questions and Answers. By R. Max Goepp, M.D., Professor of Clinical Medicine at the Philadelphia Polyclinic; Associate in Clinical Medicine at Jefferson Medical College; Assistant Visiting Physician to the Philadelphia General Hospital. Price, cloth, 12s. 6d. net.

SCIENCE PRESS, THE, New York.

The Influence of Caffein on Mental and Motor Efficiency. By H. L. Hollingworth, Ph D., Instructor in Psychology, Barnard College, Columbia University. Archives of Psychology. Edited by R. S. Woodworth. No 22, April, 1912. Columbia Contributions to Philosophy and Psychology. Vol. XX., No. 4. Price not stated.

SMITH, ELDER, AND CO., London.

Dictionary of National Biography. Edited by Sir Sidney Lee, Second Supplement (in three volumes). Vol. I. Abbey-Byrc. Price 15s. net each volume, in cloth; or in half-morocco, 20s. net. (Date of publication of Volume I. June 6th, 1912.)

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BATTERSBY, JAMES, F.R.C.S Eng., has been appointed Dispensary Surgeon to the Glasgow Royal Infirmary.

ETHERINGTON-SMITH, R. B., F.R.C.S Eng., has been appointed Assistant Surgeon to St. Bartholomew's Hospital.

FERGUSON, RALPH SANDERSON, M B, C.M. Edin., has been appointed Medical Officer of Health by the Calne (Wilts) District Council.

GIBBS, CHARLES, F.R.C.S. Eng., has been appointed Surgeon-in-Charge of In-patients at Charing Cross Hospital.

HARPER, J. M., M.R.C.S., has been appointed Certifying Surgeon under the Factory and Workshop Acts for the Bath District of the county of Somerset.

LANE-CLAYPON, JANET, M.D., D.Sc. Lond., has been appointed Lecturer in Hygiene and Physiology at King's College for Women (Home Science Department).

RENTON, J. MILL, M.B., Ch.B. Glasg., F.R.C.S. Edin., has been appointed Surgeon to the Out-patient Department at the Western Infirmary, Glasgow.

ROBERTSON, A. N., M.B., Ch.B. Edin., has been appointed Assistant Medical Officer for Herefordshire.

SUTHERLAND, JOHN, M.B., B.Ch. Glasg., has been appointed House Surgeon at the Birmingham and Midland Eye Hospital.

Vacancies.

For further information regarding each vacancy reference should made to the advertisement (see Index).

BANGOR, CARNARVONSHIRE AND ANGLESEY INFIRMARY.—House Surgeon. Salary £100 per annum, with board, washing, and lodging.

BIRKENHEAD BOROUGH HOSPITAL.—Junior House Surgeon. Salary, £80 per annum, with board and laundry.

BIRMINGHAM INFIRMARY.—Three Assistant Medical Officers. Salary from £104 to £120 per annum, with apartments, rations, laundry and attendance.

BRENTWOOD, ESSEX AND COLCHESTER ASYLUM.—Assistant Medical Officer. Salary £150 per annum, with board, &c.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £160 per annum, with rooms, coals, gas, and attendance.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Assistant House Surgeon, unmarried. Salary £80 per annum, with apartments, board, and laundry.

BRISTOL GENERAL HOSPITAL.—House Physician for six months. Salary £80 per annum, with board, residence, &c.

BRISTOL ROYAL INFIRMARY.—Honorary Dental Anæsthetist.

CANCER HOSPITAL, Fulham-road, S.W.—House Surgeon for six months. Salary £70 per annum.

CARMARTHEN, JOINT COUNTIES ASYLUM.—Second Assistant Medical Officer. Salary £160 per annum, with board, lodging, washing, &c.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road.—Resident House Surgeon. Salary £50 per annum, with board and residence. Also Registrar. Also Clinical Assistants.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £80 per annum, with board, apartments, and laundry.

CITY OF LONDON LYING-IN HOSPITAL, City-road, E.C.—Resident Medical Officer for four months. Salary at rate of £50 per annum, with board, lodging, and washing.

COVENTRY AND WARWICKSHIRE HOSPITAL, Coventry.—Senior House Surgeon. Salary £120 per annum, with rooms, board, washing, and attendance.

DUBLIN, RICHMOND DISTRICT ASYLUM.—Junior Medical Officer, unmarried. Salary £120 per annum, with rations and apartments.

DUMFRIES AND GALLOWAY ROYAL INFIRMARY.—Assistant House Surgeon. Salary £55 per annum, with board and washing.

DUNDEE DISTRICT ASYLUM.—Senior Resident Medical Officer and Junior Resident Medical Officer. Salary £175 and £120 per annum respectively, with board and apartments.

FARRINGDON GENERAL DISPENSARY AND LYING-IN CHARITY, 17, Bartlett's Buildings, Holborn-circus, E.C.—Resident Medical Officer. Salary £100 per annum, with rooms, attendance, &c.

GLOUCESTER, GLOUCESTERSHIRE ROYAL INFIRMARY AND EYE INSTITUTION.—Assistant House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

GREENOCK INFIRMARY.—Assistant House Surgeon. Salary £40 per annum, with board and residence.

HARTLEPOOLS HOSPITAL.—House Surgeon. Salary £100 per annum with board, washing, and lodging.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, W.C.—House Surgeon, unmarried, for six months. Salary £30, washing allowance, and board and residence.

HUDDERSFIELD ROYAL INFIRMARY.—Assistant House Surgeon. Salary £80 per annum, with board, residence, and laundry.

HULME DISPENSARY, Dale-street, Stretford-road, Manchester.—House Surgeon. Salary £160 per annum, with rooms and attendance.

INDIAN MEDICAL SERVICE, India Office, London.—Twelve Commissions.

INVERNESS DISTRICT ASYLUM.—Junior Assistant Physician. Salary £150 per annum, with board, lodging, and laundry.

LEAMINGTON SPA, WARNEFORD GENERAL HOSPITAL.—House Physician. Salary £85 per annum, with board, residence, and laundry.

LEEDS PUBLIC DISPENSARY.—Junior Resident Medical Officer. Salary £100 per annum, with board, residence, and washing.

LIVERPOOL HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Mount Pleasant, Liverpool.—Honorary Assistant Physician.

LONDON HOSPITAL MEDICAL COLLEGE.—Demonstrator in Physiology. Salary £150 per annum.

MANCHESTER ROYAL INFIRMARY.—Assistant Medical Officer, unmarried, to Convalescent Hospital, Cheadle, for six months. Salary at rate of £80 per annum, with board and residence.

MANCHESTER, ST. MARY'S HOSPITALS FOR WOMEN AND CHILDREN.—Resident Obstetric Officer. Salary £100 per annum, with board and residence. Also Anæsthetist for three days a week.

MARGARET-STREET HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST (FOR OUT-PATIENTS), 26, Margaret-street, Cavendish-square, W.—Honorary Physician.

MELBOURNE UNIVERSITY, Victoria, Australia.—Chair of Veterinary Pathology and Directorship of the Veterinary Institute. Salary £900 per annum.

MERSTHAM, SURREY, NETHERNE ASYLUM.—Locum Tenens. Salary 4 guineas per week, with board, apartments, attendance, and laundry.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead.—House Physician. Salary £75 per annum, with board, residence, and washing. Also House Physician at Northwood. Salary £75 per annum, with board, residence, and washing.

NATIONAL INSTITUTIONS FOR PERSONS REQUIRING CARE AND CONTROL.—Superintendents at two Country Institutions. Salary £300 per annum, with house and garden.

NEW HOSPITAL FOR WOMEN.—Obstetric Assistant, Assistant Pathologist, and Clinical Assistant (all females).

NEWPORT AND MONMOUTHSHIRE HOSPITAL.—Two Resident Medical Officers. Salaries in each case at rate of first four months £80 per annum, second four months £100 per annum, third four months £120 per annum, with board, residence, and laundry.

NOTTINGHAM CHILDREN'S HOSPITAL.—House Surgeon (female) for six months. Salary at rate of £100 per annum, with apartments, board, and washing.

NOTTINGHAM GENERAL DISPENSARY.—Assistant Resident Surgeon, unmarried. Salary £160 per annum, with apartments, attendance, light, and fuel.

PRESCOT UNION WORKHOUSE AND INFIRMARY, Whiston, Prescot, near Liverpool.—Resident Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, board, washing, attendance, &c.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Junior House Physician. Salary £60 per annum, with residence, board, and laundry. Also Honorary Anæsthetist. Also Honorary Surgical Registrar.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, London, N.E.—Casualty Officer for six months. Salary at rate of £80 per annum, with board, residence, and washing.

ROYAL EYE HOSPITAL, St. George's-circus, S.E.—Junior House Surgeon for six months. Salary at rate of £50 per annum, with board and residence.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—Clinical Assistants.

ROYAL WATERLOO HOSPITAL FOR CHILDREN AND WOMEN, S.E.—Senior Resident Medical Officer. Salary at rate of £70 per annum, with board and washing.

ST. GEORGE'S UNION INFIRMARY, Fulham-road, S.W.—Second Assistant Medical Officer. Salary £130 per annum, with board, residence, and washing.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Senior House Surgeon. Salary £100 per annum, with board, residence, &c.

SHEFFIELD ROYAL HOSPITAL.—Sixth Resident, unmarried. Salary £60 per annum, with board, lodging, and washing.

SHEFFIELD UNIVERSITY.—Demonstrator in Anatomy. Salary £150 per annum.

SMETHWICK, CORNWALL WORKS DISPENSARY.—Medical Officer. Salary £400 per annum.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—House Physician. Salary £100 per annum, with board, residence, and laundry.

WEST LONDON HOSPITAL.—Physician. Also Non-resident Casualty Officer for six months. Salary at rate of £100 per annum, and lunch. Also House Physician for six months. Board, lodging, and laundry provided.

WINCHESTER, ROYAL HAMPSHIRE COUNTY HOSPITAL.—House Physician. Salary £80 per annum.

WINDSOR, KING EDWARD VII. HOSPITAL FOR WINDSOR, ETON, AND DISTRICT.—Resident Second House Surgeon.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

ZANZIBAR, PUBLIC HEALTH AND MEDICAL DEPARTMENTS.—Assistant Health Officer at Zanzibar and Medical Officer at Pemba. Salary in each case £350 per annum, with quarters, and a bonus of £300 on completion of term of service.

Births, Marriages, and Deaths.

BIRTHS.

MARRIAGE.—On June 3rd, at 109, Harley-street, W., the wife of Herbert J. Marriage, M.B., B.S. Lond., F.R.C.S., of a daughter.

MARRIAGES.

BROOKS—HOPE.—On May 25th, at Christ Church, Woburn-square, Ralph Terence St. John Brooks, M.B., to Julia Margaret, daughter of Mr. and Mrs. William Hope, of Washington, U.S.A.

MOORE—DAVIES.—On June 5th, 1912, at the Parish Church, Westbury-on-Trym, Bristol, by the Rev. S. W. L. Richards, D.C.L., Minor Canon of Bristol Cathedral, Clifford Arthur Moore, M.S., F.R.C.S., 56, St. Paul's-road, Clifton, Bristol, to Mary Elizabeth Davies, late of the Bristol General Hospital.

WHEELER—SANDERS.—On May 31st, 1912, at St. Bartholomew the Great, West Smithfield, by Rev. C. W. R. Higham, M.A., uncle of the bride, assisted by Rev. W. F. G. Sandwith, M.A., Rector, Edwin Paul Wheeler, A.R.I.B.A., third son of the late T. R. Wheeler, of Ealing, to Madeline Mary Sanders, eldest daughter of C. Sanders, M.O.H. of West Ham.

DEATHS.

SEDGWICK.—On May 31st, at The Firs, Copse-hill, Wimbledon, James Sedgwick, M.D., J.P., formerly of Boroughbridge, Yorks, aged 77 years.

STOKER.—On June 1st, at his residence in Dublin, Sir W. Thornley Stoker, Bart., M.D., M.Ch. R.U.I., aged 67 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

RADIUM AND MEDICINAL SPRINGS.

To the Editor of THE LANCET.

SIR,—The enclosed *jeu d'esprit*, written by my friend Dr. Josenhans for a congress of medical men at Wildbad, may interest your readers.

I am, Sir, yours faithfully,

Wimpole-street, W., June 1st, 1912. R. FORTESCUE FOX.

DAS LIED VOM RADIUM.

Seit ur ur-alten Zeiten
Führt Wildbad Radium,
Nur waren, es zu finden,
Die Menschen noch zu dumm.

Seit ur ur-alten Zeiten
Heilt Wildbad kranke Leut,
Nur waren, dies zu glauben,
Die Aerzte zu gescheidt.

Es liess den festen Glauben
An's Wildbad sich das *Volk*
Durch nichts und niemals rauben:—
Es *spürte* den Erfolg.

Dass Volksmund, Gottesstimme,
Glaubt der *Gelehrte* nicht,
Leicht glaubt der nur, was immer
Autoritätsmund spricht;

Es waren ihm die Thermen
Bisher "indifferent,"
Was man in deutscher Zunge
Auch "wurst" und "schauppe" nennt.

Jetzt neu neu'stens, glaubt an's Wildbad
Selbst die Gelehrtenwelt!
Nicht, weil es heilt—behüte!—
Weil's Radium enthält!

CHOLERA IN SICILY.

Mr. Vice-Consul Franck, in his annual report to the British Foreign Office, states that the city and province of Catania were visited by cholera during the third quarter of 1911. About 800 cases occurred between July and November. Of these, 270 cases, bacteriologically ascertained, proved fatal. The disease prevailed in thickly populated unclean quarters, peopled by fishermen. Through bacteriological observation it was discovered that the water along the shore was infected. Fortunately no difficulties were encountered in abating the disease, the poorer classes showing no resistance to sanitary measures, as had been the case in former instances.

RIEDEL'S BERICHTE AND MENTOR.

THE 1912 edition of this useful compilation of pharmacological advances has recently been issued (Berlin). It is divided into four sections occupying 217 pages. The first section deals with recent scientific investigations and analytical considerations; the second is a review of the most important work of the year 1911; the third is a guide to the names, composition, properties, and applications of new remedies and special technical products; and the fourth deals with the special pharmaceutical preparations made by the J. D. Riedel Company, of Berlin, and of 54, Cannon-street, London, E.C. The book is worth studying as a record of pharmacological progress, full references being made to the original papers.

A SMOKING MIXTURE.

Messrs. R. and J. Hill, Limited, of London, have submitted to us a specimen of their "Badminton Smoking Mixture," which they describe as sweet and mild and absolutely pure. These claims seem to us to be justified by practical experiment; the blend is a well-devised one.

Ariel.—When the medical attendant has recommended the removal of the patient to an asylum his responsibility is at an end and it falls entirely upon the shoulders of the patient's relatives. If the medical attendant does not feel sure of the *bona fides* of the patient's relatives he may fortify his position by asking for a consultation with another practitioner, either specialist or general; or, if this is declined, by writing a letter, a copy of which he should keep, to the relatives stating his opinion and pointing out the serious consequences which may possibly ensue.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for June:—

May 23rd–June 8th (London, Olympia).—Royal Naval and Military Tournament.

May to October (London, Earl's Court).—Shakespeare's England.
June 3rd–10th (Salford).—Tuberculosis Exhibition.
,, 6th–12th (Bristol).—Health Conference and Exhibition.
,, 11th–14th (Caxton Hall, Westminster).—Second National Conference on the Prevention of Destitution.
,, 12th–22nd (London).—Missionary Exhibition.
,, 17th–29th (London, Olympia).—International Horse Show.
,, 21st and 22nd (Middelburg).—Dutch Congress for Public Health Regulations.
,, 23rd–27th (London, Royal Horticultural Hall).—The (Biennial) Health Conference and Exhibition.
,, 29th (Coventry).—Society of Medical Officers of Health (Annual Provincial Meeting).
,, (Birmingham).—Tuberculosis Exhibition.
,, (London, Science Museum, South Kensington).—Second Optical Convention.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY, Burlington House, London, W.

THURSDAY.—Hon. R. J. Strutt: A Chemically Active Modification of Nitrogen, Produced by the Electric Discharge (IV.).—Prof. J. C. McLennan: (1) On the Series Lines in the Arc Spectrum of Mercury (communicated by Sir J. Larmor, secretary to the Royal Society); (2) On the Constitution of the Mercury Green Line $\lambda = 5461$ AU and on the Magnetic Resolution of its Satellites by an Echelon Grating (communicated by Sir J. Larmor).—Prof. W. H. Young: (1) On the Convergence of Certain Series Involving the Fourier Constants of a Function; (2) On Classes of Summable Functions and their Fourier Series.—Mr. H. G. Y. Moseley: The Number of β Particles Emitted in the Transformation of Radium (communicated by Prof. E. Rutherford).—Mr. S. D. Carothers: Portland Experiments on the Flow of Oil (communicated by Prof. W. McF. Orr).—Mr. G. B. Jeffery: On a Form of the Solution of Laplace's Equation suitable for Problems Relating to Two Spheres (communicated by Prof. L. N. G. Filon).—Mr. A. Ll. Hughes: On the Emission Velocities of Photo-Electrons (communicated by Sir J. J. Thomson, O.M.).

ROYAL SOCIETY OF MEDICINE, 1, Wimpole-street, W.

MONDAY.
SPECIAL MEETING OF FELLOWS OF THE SOCIETY: at 4.30 P.M.
Discussion
On Syphilis with Special Reference to
(*a*) Its Prevalence and Intensity in the Past and at the Present Day (opened by Dr. Norman Moore).
(*b*) Its Relation to Public Health, including Congenital Syphilis (opened by Dr. F. W. Mott, F.R.S.).
(*c*) The Treatment of the Disease (opened by Mr. D'Arcy Power).
The Discussion will be continued on June 17th and June 24th at 5 P.M.
The following gentlemen will take part in the Discussion:—Mr. Ernest Lane, Mr. Jonathan Hutchinson, Mr. J. E. R. McDonagh, Mr. Macleod Yearsley, Dr. G. Pernet, Mr. H. W. Bayly, Major French, Sir George Savage, Dr. Douglas White, Dr. F. E. Fremantle, Dr. H. R. Dean, and the President (Sir Henry Morris, Bart.) will wind up the Discussion.
Fellows who desire to take part in the Discussion are requested to communicate with the Hon. Secretaries.

TUESDAY.
SURGICAL SECTION (Hon. Secretaries—L. A. Dunn, James Berry): at 5.30 P.M.
Papers:
Mr. P. Lockhart Mummery: Cases of Intractable Constipation Treated by Operation.
Mr. H. W. Carson: (1) A Case of Venous Thrombosis of the Colon causing Obstruction; (2) A Case of Right Duodenal Hernia.
Mr. Paul B. Roth: A Case of Osteoperiostitis of the Tibia and Fibula.
Mr. Stephen Paget will show a Man from whom the Scapula was Excised Ten Years Ago.

FRIDAY.
SECTION OF ANÆSTHETICS (Hon. Secretaries—Mrs. Dickinson Berry, H. J. Scharlieb, C.M.G.): at 5.30 P.M.
Annual General Meeting—Election of Officers and Council for the ensuing Session.

UNITED SERVICES MEDICAL SOCIETY, Royal Army Medical College, Grosvenor-road, S.W.

WEDNESDAY.—5 P.M., Annual General Meeting.

OPHTHALMOLOGICAL SOCIETY, 11, Chandos-street, Cavendish-square, W.

THURSDAY.—8 P.M., Card Specimens will be shown by Mr. P. H. Adams and Mr. H. Spicer. Papers:—Mr. E. Nettleship: (1) Pedigrees of Colour-blindness showing Unusual Characters; (2) A Pedigree of Progressive Juvenile Cataract.—Mr. C. H. Usher: Pedigree of Colour-blindness.—Mr. M. L. Hepburn: Inflammatory and Vascular Diseases of the Choroid.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East.

TUESDAY AND THURSDAY.—5 P.M., Mr. L. Dudgeon: The Pathology of Immunity, as Illustrated by the Behaviour of Fluid Exudates from the Tissues and Various Body Cavities, in Acute and Chronic Bacterial Infections, more especially with Regard to the Problem of Aggressins. (Croonian Lectures.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. S. E. Dore: Clinique (Skin). 5.15 P.M., Lecture:—Mr. N. B. Harman: Styes.
TUESDAY.—4 P.M., Dr. H. L. Tidy: Clinique (Medical). 5.15 P.M., Lecture:—Mr. W. G. Spencer: On the Operations for Cancer of the Tongue.
WEDNESDAY.—4 P.M., Sir A. Pearce Gould, K.C.V.O.: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. H. L. Jones: Ionic Medication.
THURSDAY.—4 P.M., Mr. R. Milne: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. J. L. Bunch: Itching and Itching Diseases of the Skin.
FRIDAY.—4 P.M., Mr. R. E. Bickerton: Clinique (Eye).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road W.

MONDAY.—10 A.M., Dr. Simson: Diseases of Women. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon, Dr. Bernstein: Pathological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Edwards: Rectal Surgery.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11 A.M., Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. R. Jones: The Treatment of Early Cases of Insanity.
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 10.30 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine.
THURSDAY.—10 A.M., Dr. Simson: Gynæcological Demonstration. 12.15 P.M., Lecture:—Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery.
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 12.15 P.M., Lecture:—Dr. Bernstein: Clinical Pathology. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Abraham: Cases of Skin Disease.
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. Bishop Harman: Diseases of the Eye. 10.30 A.M., Medical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10.30 A.M., Surgical Out-patient (Mr. E. Gillespie). 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. D. Gillies). 3 P.M., Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan).
TUESDAY.—Clinic: 2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. Howell Evans); Gynæcological (Dr. A. E. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Demonstration:—Dr. A. E. Giles: Specimens of Gynæcological Interest.
WEDNESDAY.—Clinics:—2 P.M., Throat Operations (Mr. Gillies). 2.30 P.M., Children's Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 8 P.M., X Rays (Mr. W. Steuart); Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan). 5.30 P.M., Eye Operations (Mr. Brooks).
THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. E. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel). 4.30 P.M., Demonstration:—Dr. G. G. Macdonald: The Wassermann Reaction.
FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie); Clinical Pathology and Pathological Demonstration (Dr. W. H. Duncan).

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.
TUESDAY.—2 P.M., Operations. 3.15 P.M., Dr. R. Wells: Medicine. 2.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Dr. G. Holmes: Nervous Basis of Abdominal Pain.
WEDNESDAY.—2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye. 5 P.M., Special Lecture:—Mr. McGavin: Surgical Demonstration.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Mr. Turner: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 4.30 P.M., Dr. W. Steuart: Radiography. 4.30 P.M., Special Lecture:—Dr. J. Cantlie: Surface Anatomy.
FRIDAY.—11 A.M., Dr. A. Davies: Pathological Demonstration. 2 P.M., Operations. 2.15 P.M., Sir J. Rose Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 2.15 P.M., Special Lecture:—Sir John Bradford: Abdominal Tumours.
SATURDAY.—Out-patient Demonstration:—10 A.M., Surgical and Medical. 11 A.M., Eye.

LONDON HOSPITAL MEDICAL COLLEGE, Clinical Theatre, London Hospital, Mile End-road, E.

MONDAY.—4.15 P.M., Clinical Lecture:—Dr. H. Head: Diagnostic Value of Sensory Changes in Diseases of the Nervous System.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.
TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. J. Taylor: Clinical Cases.
FRIDAY.—3.30 P.M., Clinical Lecture:—Mr. L. Paton: Optic Neuritis.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.
WEDNESDAY.—4 P.M., Dr. Fenton: Demonstration of Cases.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.
TUESDAY.—6 P.M., Dr. J. L. Bunch: Lupus Erythematosus and its Treatment.

MANCHESTER ROYAL INFIRMARY.
TUESDAY.—4.30 P.M., Dr. Cunliffe: Demonstration of Medical Cases. (Post-Graduate Clinic.)
FRIDAY.—4.30 P.M., Mr. Rayner: Cervical Adenitis in Children. (Post-Graduate Clinic.)

ANCOATS HOSPITAL, Manchester.
THURSDAY.—4.15 P.M., A Clinical Demonstration of Medical and Surgical Cases will be given by the Members of the Honorary Staff. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London, (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (12th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M., Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.)., Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (15th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.), Hospital operations are performed daily.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 5th, 1912.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
May 30	29·81	W.	...	120	75	56	56	61	Cloudy
,, 31	29·83	S.	0·31	103	66	53	56	58	Cloudy
June 1	29·72	E.	...	91	67	53	56	60	Overcast
,, 2	29·46	S.E.	0·17	101	62	50	54	56	Raining
,, 3	29·47	W.	0·04	124	67	50	53	58	Cloudy
,, 4	29·42	S.W.	0·15	110	63	51	53	56	Cloudy
,, 5	29·52	S.W.	0·17	122	64	48	48	50	Raining

The following journals, magazines, &c., have been received:—Annals of Tropical Medicine and Parasitology, Revue de Gynécologie, Journal of the Royal Sanitary Institute, St. Mary's Hospital Gazette, Edinburgh Medical Journal, Die Gesundheitskontrolle durch den Organsinn, Annual Report of the Manila Bureau of Science, Transvaal Medical Journal, Polyclinic, South African Medical Record, Dominion Medical Monthly, Prince Alfred Hospital Gazette, Canadian Journal of Medicine and Surgery, Homœopathic Recorder, Deutsche Zeitschrift für Nervenheilkunde, Annales de Gynécologie et d'Obstétrique, Archives of Internal Medicine, Journal of Laryngology, Rhinology, and Otology, Therapeutic Gazette, Archives of Diagnosis, St. Bartholomew's Hospital Journal, Jahrbuch für Kinderheilkunde und Physische Erziehung, Annali di Medicina Navale e Coloniale, Archives of Pediatrics.

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N.—Mr. W. J. W. Nicol, Lond.; Dr. P. C. Nandi, Calcutta; Northamptonshire County Council, Northampton, Clerk to the; Dr. F. P. Nunneley, Llandrindod Wells; Netherbrook Nursing Home, Finchley, Superintendent of.

P.—Dr. T. W. Parry, Lond.; Pneumosan Chemische Fabrik, Lond.; Mr. F. E. Potter, Lond.

R.—Dr. O. Richards, Lond.; Mr. Randle, Lond.; Mr. Richardson, Liverpool; R. G. A.

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T.—T. C.

V.—Messrs. Van Houten, Lond.; Vaukaner, India, Chief Medical Officer of.

W.—Mr. J. M. Wyatt, Lond.; Mr. E. Williams, Mold; Dr. A. A. Warden, Paris; W. H. W.

Z.—Messrs. C. Zimmermann and Co., Lond.